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AMERICAN BEE JOURNAL
HAMILTON — ILLINOIS

OCTOBER 1931

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Our Cover Picture

Those two little English tots, again. It's time the honey of this year should disappear into a composite of rosy cheeks and roguish eyes. Honey is one food we may leave on the table top even if the kiddies do think they are putting one over on us when they climb up to fill their tummies with Nature's Perfect Sweet.

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THE AMERICAN BEE JOURNAL

Established by Samuel Wagner in 1861

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AMERICAN BEE JOURNAL

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A Changing World Brings Us New Opportunities

By Orin Jessup
Indiana

WE live in an age when it is not safe to predict how things will be sold tomorrow. It was only yesterday when the horse-drawn vehicle was our only way of transportation and all our roads were dirt or gravel. Today cement highways lead everywhere, filled with autos. Changing conditions, therefore, influence distribution and selling plans of every kind. We must meet competition in this swift age. Agriculture has been the last to recognize the changing conditions. Cooperative marketing is a form of the modern merger, and I predict it will be the salvation of agriculture. The farmer who does not cooperate will drop by the wayside by the process of elimination.

Merchandising methods likewise change. Yesterday retail grocery stores were owned by individuals; today the chain store has applied the principle of mass buying and dominates the field. In Indiana the chain store has changed the small beekeeper's market. Not long ago a beekeeper could go to the grocery store to sell his honey. Today he is directed to the buyer for the chain store in a distant city, who buys in car lots, leaving the business to be supplied from a big bottling plant, with honey bought cheaply, bottled and labeled by machinery.

The beekeepers of the West have organized the large cooperative associations as a result of this policy of mass buying and selling. Today we look to the West for our quotations on honey. These associations govern Indiana prices. Beekeepers in Indiana must place a price on that product no higher than the cooperatives, plus transportation charges, or the honey buyers will buy it from the West. And let me say right here that unless Indiana producers grade their honey more carefully they are soon going to find all the wholesale business going West, because the organizations there grade carefully and a buyer can buy with confidence.

Honey by the roadside is a common sight now to traveling America. Yet, among all those who have tried this method to dispose of their crops, it is likely that few have the experience so well developed as Orin Jessup. His conclusions should be of real merit to the beekeeper who seeks this way to market.



Mr. Jessup and one of his stands. Simple, easy to move, plain to see.

These changing market conditions will force beekeepers to merge, to consolidate, form cooperative organizations, or in time they will be left out in the cold, too.

The same thing holds true of producing honey. Beekeepers of the near future will have to use mass production. We must cut production costs to the bone. Probably more stress should be put on distribution than on production, about which we already have a fair understanding.

The most far-reaching agency we now possess to speed up consumption is the American Honey Institute, which has inaugurated a wonderful plan of salvation for honey producers. It is hard to predict just how low in price honey would be now if it were not for the educational campaign conducted by the Institute.

Much is said of the difference in the price the farmer receives and the price the consumer pays. Many readers seem to think the middleman should be eliminated and his profits turned over to the producer. It is stupid to think that the service of the middleman may be omitted. Under modern conditions the consumer demands his service, and the consumer has the right to have commodities brought to him as he prefers.

The consumer today demands service as never before, and service is costly because labor is costly and rent is costly, and everything that goes to make up efficient service is costly. If the consumer prefers to buy apples, potatoes and turnips a pound at a time, they must be served this way and the consumer must pay for it.

Middleman service can't be eliminated, neither can the cost of it be reduced much. Much of this service may be given by the producer if he will make the necessary adjustments and is willing to do the necessary work. Producers can learn how the consumer wants honey served and learn to meet his demand, thus receiving the pay for this work that now goes to others. He can't eliminate this service. Nobody can do it, because it is demanded by the con-

sumer. He must learn the game and qualify for the field.

There is a wide field for distribution in a wholesale way to delicatessens, commission men, bakeries, and to beekeepers who have a retail trade in excess of their supply. These may be reached through advertising in the journals or through solicitation.

For those beekeepers located near a good retail market and who have the time and inclination to retail from house to house, there are splendid possibilities. The beekeeper in this way comes in direct contact with the consumer, he gets to know the family eating his honey, learns the hobbies, plays with the kiddies, and makes acquaintances. I envy the fellow who has a good bee yard or so and a personal following which will absorb his crop.

There are some diversions to this plan. Some employ children, giving them prizes or money to sell their neighbors and friends, while others employ adults to canvass every home systematically. The beekeeper who adopts this plan should have little fear of competition as long as he delivers quality honey at reasonable prices.

In 1929, Gleanings published a novel plan for selling honey. It told the story of a man who built a wagon, screened in, so he could let live bees crawl over his body. He moved from town to town, making demonstrations to draw crowds and selling them honey from the wagon. This required the gift of gab and the gall and ability of a circus barker. I imagine most beekeepers are too reserved and dignified for a campaign of this kind, yet there are some who could use it to advantage.

Then there is mail order retailing and wholesaling. I imagine, with proper advertising, this would be successful. We have advertised in farm journals for agents to sell honey and have shipped considerable honey into four different states, although so far our advertising and postage expense has exceeded our profits on the shipments. Even with our limited experience, however, we have faith in the success of this plan.

In our own selling, the roadside stand has been the plan with which we started and, with a few exceptions, has been the system which we have employed generally.

In 1927 we increased our apiary from nine to fifty colonies and found ourselves in possession of about a ton of honey, with a limited number of customers. We then saw a problem we were not prepared to meet when we increased the size of our apiary.

We live north of Indianapolis, near U. S. Road 31, which is the main highway from South Bend, Indiana, to Miami, Florida, paved most of the way. As I sat one day watching cars go by, by the thousands, the thought

occurred to me that there was the opportunity to sell our honey.

We set up a stand under an apple tree and were soon convinced that this was the solution. We decided to try to interest someone living on the road to handle honey on commission. We located a stand and it sold over two tons of honey the first year. The word "Honey" is painted on each end of the stand and can be seen 500 feet down the road each way. The words "Blow Horn" on the front cause the motorist to call if there is no attendant.

The stand itself can be placed on the rear bumper of an automobile and moved from place to place. Six signs, 8x30 inches, with the word "Honey" are set on posts 200 feet apart in each direction from the stand, calling attention to the honey so the motorist can begin to slow down.

We live within six miles of the city limits of Indianapolis, the crossroad of America. In addition to the north and south road mentioned, the National Highway goes through Indianapolis and is paved every foot of the way from Washington, D. C., to St. Louis. Other paved roads lead out like spokes in a wheel to the northern Indiana lake resorts, Pikes Peak, Yellowstone National Park, Chicago, the Great Lakes, Florida, California, and all the large cities of the country.

The city of Indianapolis has a population of approximately 400,000, which is a local avenue for sales, and the numerous state and national roads make this location look like a wonderful opportunity to sell honey in a retail way.

So we started one stand after another and now have a stand on every state and national road—fifteen in all. Our honey has gone into thousands of homes in Indianapolis, and almost every state in the Union, including Mexico and two of the Canadian provinces.

It was almost a year before we got all the stands established, and since we started the first one, a little over three years ago, our sales have been over forty tons of honey. Starting with nine colonies and increasing to one hundred and twenty could not be expected to produce anything like that much honey, so you will see that we not only sell our own product but that of other beekeepers as well, less fortunately located. Last season we sold the product of five other large yards in our county. We have often been compelled to buy outside the state.

The honey is placed on consignment, allowing 20 per cent commission, and losses on credit have been less than \$5.00 and on stolen honey about \$25.00, which is insignificant compared to the volume of business.

The display of honey on the stands has a greater bearing on sales than

any other factor. When a stand holder fails to make a daily practice of filling the stand, sales decrease at once. To prevent this, I conduct a contest in the summer that keeps our stand owners on their toes, and, of course, to win they realize they must display every minute. One stand holder got so enthusiastic that he put lights on his stand and stays with the display until 10 o'clock at night. He has since built a stand enclosed with glass on three sides, has put in a stove, and he is on the job day and night regardless of the weather.

The quality of honey must be of the best to get repeat business, without which no business can survive. We use the best containers we can get, and the finest five-color labels. If there is a family in the city or surrounding towns who travels by auto who has not seen our display, then they are simply blind. They cannot get out of or into the city without passing them unless they travel on unimproved roads.

I want to mention five major handicaps under the heads of credit, location, season, confidence, and competition:

First, let us consider credit. We have found it almost impossible to sell honey outright for cash to the roadside standholders. As a result they are sometimes careless about keeping up the appearance of the containers, and they will not push the sales as vigorously when their money is not invested. We have a large investment there, and in honey, jars and equipment at home, ready for delivery, before we can collect for that sold.

Location. We have found that 90 per cent or more of our customers live in Indianapolis and most of them buy on their return home from the country or surrounding towns. So if the stand is on the left-hand side when they are returning, they have to stop on the opposite side of the road, cross over or drive across. So they do not stop. The stand, to be successful, must be on the right-hand side of the road.

We have also discovered that the stand must be in front of a typical farm home, with beehives in view, if possible. Now when you go out hunting for a typical farm home on the right-hand side of the road, it is like hunting for a needle in a haystack. We have only eight of our stands on the right-hand side, after three years' hunting. There are not many families interested in a small business of this sort. Getting a satisfactory location is a real problem.

Seasons. Roadside stands are only profitable during summer. From December to April, business is not good. People do not drive much in winter and it is too disagreeable to stop. We purchased a stand in the city market

over a year ago, to get honey where people do shopping in winter, and we are building a good trade there. We expect that stand, together with our mail order business, to keep the wolves from our door in winter.

One winter we experimented with grocery stores, delicatessens and barbecues, thinking we could build a trade with them to take care of the winter. We placed our honey in six of the best groceries, two of the finest delicatessens and six barbecues in the country, but with one or two exceptions they were not worth bothering with.

Confidence. The other obstacles are insignificant compared to this. Why is it that stands must be in front of a farm home? Why is it that bee-hives stimulate sales? Simply because customers have more confidence in the honey when they secure it that way. They are skeptical of honey. Producers are so close to production they cannot see that people as a whole do not yet know much about honey. If people were educated generally about honey, production would jump at once, and it would take years to catch up.

Competition. Honest and fair competition does not hurt business. Our stand that sells the most honey has two other stands within five miles, all on the same road. People buy more where there are numerous stands, because the honey is called to their attention more frequently and more forcibly. That is why many dealers try to get on the same street or in one section of the city.

A roadside stand around a city like Indianapolis puts you in competition with many beekeepers, some of whom do not like it. They will go the limit in broadcasting the fact that we do not produce all the honey we sell, yet we call it "Jessup's honey." This hurts our business, it hurts his, and that of every other beekeeper, creating distrust and lack of confidence. Most distributors do not raise or make all of the product which they sell. It is absurd to use such an argument to knock a competitor. However, where there is one like this, there are dozens of the right kind, who boost honey and create confidence.

I believe that as the big road expansion program is carried forward the roadside stand selling can be made one of the largest avenues of distribution. It is often overlooked. Hundreds of people will buy in front of a farm house who never buy from any other source.

Inner Tube to Mend Smoker

A good kink I saw at the apiary of Jack King, Buffalo, North Dakota: When a smoker bellows gives out, recover it with rubber from an inner tube. He says it never cracks.

Fred A. Parker, California.

The Bottling Temperature of Honey

By H. F. Wilson
Wisconsin

We recommend 160° F. as the temperature to use in heating honey, in spite of the fact that 140° has been claimed to be sufficient. Honey can be sterilized at 140°; it can be even sterilized at 100° when left for sufficient time, but I believe the greatest success is in heating the honey as rapidly as possible to 160° and then cooling as quickly as possible.

If honey is heated to 160° outside and 140° inside the mass, the result will be satisfactory. If honey is heated to 140° on the outside and to perhaps 120° inside, there is almost sure to be some yeast spores left, so the heating will have been of little value. When the honey is canned, the containers should be distributed separately until cool. When allowed to stand in a pile, the inner containers will retain their heat for a long time and the honey is almost sure to be darkened.

I think the following statement is correct: Honey held at low tem-

peratures after it is extracted will not change to any great extent, probably over a period of years, although we have proof of this so far only for two years. Honey that is stored at from 60 to 75° may or may not ferment, but the danger is great enough not to warrant the risk. Then there is a point at which honey begins to deteriorate as soon as it is removed from the hive. The higher the temperature, the more rapid the deterioration as far as color is concerned.

At 80° the changes in color are slow and, from actual observation in our experiments, are not apparent to the eye after a year. Just how long honey might continue at this temperature is still to be determined.

Record Crop in N. Carolina

A record honey crop was produced by beekeepers in North Carolina this year, since the nectar-yielding plants in all parts of the state were unusually abundant.

C. L. Sams, extension specialist at the state college, is using this favorable season as an argument to beekeepers to get ready for next year, when they may also have another basket right side up.

We Beat the World for Drouth

I had no idea that the drouth conditions were as bad as your letter of August 3 indicate. We beat the world here in Montana for long drouth. We had no winter last winter, no snow, no rain this spring and summer. A rain yesterday, August 6, and about a week ago is bracing things up a little, but there is no hay crop, no grain crop and no gardens.

Governor Erickson of Montana is touring the state to get in touch with the drouth area, and on next Monday he meets at Bismarck, North Dakota, to consult with the governors of North Dakota, South Dakota, and Minnesota on relief.

Stock in this area is dying from lack of water, as the streams are practically all dry and so are many springs and wells, with the Missouri River the lowest ever known.

I have a bee yard on a 5000-acre sheep ranch where they have a big acreage under irrigation for alfalfa and sweet clover. They have not had any water for irrigation. All livestock has been removed for greener pastures. No hay this year, but we will probably have some alfalfa. Some of our grain seeded last spring is coming up now. The enormous forests in the western part of Montana and surrounding states are afire.

A. E. Trapp, Montana.



This picture, taken about 1916, in front of the hotel at Grass Range, shows a string of trout from the local creek. In 1931 this creek was entirely dry and parched



September

In hundreds of apiaries in the Middle West prospects of a season of entire failure were changed suddenly with the coming of September. Seldom do we have the combination of factors at this season of the year which have prevailed during the past few weeks. After a summer of deficient rainfall and light honeyflows, we have had an unusual amount of heartsease in the grain fields and waste places. Late rains have provided moisture, and temperatures during the day have ranged unusually high for this time of year. Warm days and cool nights have resulted in a honeyflow from heartsease much above the average. Now we hear that hundreds of bee men who had feared that the season would close with no honey to sell now find themselves with a modest crop of surplus and brood chambers well filled for winter stores.

The Middle West is a region of great extremes. We are subject to heat and cold, to excessive rainfall and severe drouth. In spite of them, we usually get fair crops and the season of entire failure is rare. Such fall flows, however, are very rare following a dry spring and summer.

Feeding for Winter

Did you make sure that all your colonies have enough food for winter? Probably not, as most beekeepers want to give the bees the opportunity to fill their hives from the late fall flow. This is not reprehensible, but we must not forget to ascertain that they have enough. There is nothing worse than to let the bees accumulate **almost enough** and let it go at that. Some colonies may have just enough to live almost through the winter and starve when spring is almost there.

Of course, the season may have been such that you need have no fear as to the supply. But sometimes a colony having a young queen in the fall may not have enough old bees to gather a surplus, while quite strong enough in bees to stand the cold weather.

At any rate we must make sure that our colonies have enough or decide upon uniting some of the weak ones to better colonies. It is high time to do this in October, as the honey crop is about over in the most favored localities. Be sure and have a little more than enough, so they may not get short at the opening of spring. Beekeepers used to consider twenty-five pounds ample, but the tendency is to leave more than that amount, and I believe it is a wise idea.

If you must feed, feed sugar syrup prepared the way Doolittle recommended. Doolittle might have been called "Doomuch," for he was very practical. For over ten years he gave, each season, in the American Bee Journal, the same recipe for making winter feed. Here is the method, taken from page 269 of the September number, 1908, of the American Bee Journal:

"Put fifteen pounds of water into a vessel that will hold about twenty-four quarts, setting the same over the fire until the water is boiling nicely. Now pour in thirty

pounds of granulated sugar—pouring in slowly and stirring the whole as poured in, so it will dissolve instead of settling at the bottom of the vessel and burning on, as would be the case were the whole poured in a body. When the sugar is dissolved, allow it to stand over the fire until the whole boils again, when five pounds of extracted honey is poured in and the syrup stirred until it boils once more, when it is ready to set from the fire. This gives fifty pounds of feed of about the consistency of honey, and as soon as it is cool enough so you can hold your hand on the outside of the vessel containing it, it is ready to pour into the feeders."

We might explain here why Doolittle used five pounds of honey, or about 10 per cent of the whole amount of feed. This is to prevent the crystallizing of the sugar. It is recommended to put in a certain amount of tartaric acid for the same purpose. But the honey is best. Of course, in respect to disease, we must be positive that the honey has come from bees that are healthy.

Doolittle used the "division board feeder." But we prefer just a plain tin can, with perforated lid, inverted upon the cluster in the brood chamber. These cans may be had anywhere and prove very satisfactory. If you have old cans without lids, just use a piece of cloth tied over the top. The bees will suck the feed through the cloth. If you invert it first over a dish, you will catch the first flow, which is sometimes a little too strong.

Excuse me for giving such a long explanation of the Doolittle method, but I do not know of anything better. Doolittle was a very careful man. He reared fine queens. I remember visiting at his apiary and his showing me some of the finest, yellowest Italian queens that I ever saw. As I made the remark that I did not care for the looks of a queen, but only for her prolificness, he replied: "Oh! You like to look at a pretty girl, why not at a pretty queen?"

New Competition for Oranges

Eastern tomato growers are making a vigorous campaign to establish tomato juice as a regular item on the breakfast table. The discovery that tomatoes are rich in vitamins has given this fruit a wonderful boost, and so generally is tomato juice now recommended by physicians that it offers serious competition to orange juice. Several of the largest canneries in New Jersey are packing tomato juice this season and it is estimated that half a million cases will be placed on the market from that state alone.

The citrus industry has shown ability to look out for itself and has built up splendid markets for its products. However, increasing freight rates and long distance from market are a serious handicap to orange growers. The tomato growers who are near the large centers of population will use this greatly to their own advantage. If the honey producers were as active in finding new outlets as the orange growers have been, there would be little difficulty in finding an outlet for our present output.

Where the Money Goes

The public is not taking very kindly to the railroads' plea for higher rates. In a recent issue of the New York Times, W. C. Burns, a peach grower of Mayesville, Georgia, tells his experience with forty carloads of peaches of this year's crop. He shipped sixteen carloads and lost so much money that he left the rest to rot. The average price received was \$551.62 per car. Cost of selling and handling was \$43.23. Railroads were paid \$319.39, while he received but \$188.98 per car for his fruit. Out of his net receipts he had to pay \$91.50 for crates and \$115.28 for picking. The fruit failed to pay cost of crates and picking, to say nothing of taxes, fertilizer, spraying, etc.

In this case, only one dollar per day was paid to fruit pickers. It is estimated that the railroads lost the opportunity to haul five thousand cars of peaches from that locality because the rate is so high as to leave nothing for the grower. Is it not possible that the roads might be better off with a lower rate which would provide the additional volume rather than to raise a rate that is already so high as to confiscate such a crop as peaches on the present market?

Many of the large producers of honey are located far from market, where the freight rate is an important matter. Most of the carload producers of honey are in the Rocky Mountain states or the plains region and, at present prices for honey, are in no position to stand higher rates.

The railroads should not overlook the fact that many are already sending their product to market in trucks. Not long since, a load of beeswax was hauled about a thousand miles by truck rather than to ship by train. Higher freight rates will not prove to the advantage of the railroads under present conditions. The volume lost will exceed the additional revenue produced.

Why Feed Sugar Syrup at All?

Some of our beekeepers will probably suggest that the feeding of sugar syrup to the bees is a mistake, since so many consumers of honey are afraid of adulteration. But it is not difficult for a beekeeper to convince his friends that the amount of sugar which he feeds to his bees is far from being sufficient to make a surplus. Besides, he can readily explain the fact that, when bees are fed, a part of the food is digested and made into beeswax. That is the main reason why no one has ever found it profitable to supply the bees with sugar syrup for surplus.

But that sugar syrup is good for winter food does not admit of a doubt, for sugar syrup does not contain any pollen grains, and it is the pollen grains floating in honey which are likely to load the intestines of the bees during long winter confinement and cause diarrhea or overloading of the alimentary canal in long confinement.

Our fall flowers contain a great deal of pollen, and we believe that there is more danger to the bees from a diet of fall honey than from clover honey or other spring produce.

The Swiss beekeepers dislike sugar syrup for winter feed, and we believe this is due to the fact that their winter is not so cold as ours, so that the bees have occasional flights to discharge their abdomens. When spring comes, honey is far preferable to sugar syrup, because the very pollen grains which cause trouble become useful in the making of the pap, or jelly, to feed the brood. So it is well to have only a small quantity of sugar syrup to help pass the coldest weather and rely on honey for the early spring food. Some of our Canadian friends want a little sugar syrup in the hives for the coldest weather, and so always give a quart or so of syrup to their bees for winter.

But we must be sure to unite our weak colonies to better ones for winter. If the weak colony has an inferior queen, as is usual, she should be killed. Then the weak colony and the one with which it is to be united must be fed so as to put them in good humor. Then the newspaper method of uniting had best be employed. Put the brood chamber of the weak colony right over the brood chamber of the strong colony, with a newspaper between the two. They usually unite without any fighting.

Don't fail to pack your colonies for winter, or at least to give them a strong windbreak so as to shelter them from the coldest winds.

An International Magazine

The Bee Kingdom, published by A. Z. Abushady at Cairo, Egypt, is a truly international bee magazine. Recent issues contain articles from well known writers in England, United States, New Zealand, Norway, and other countries outside the land of publication. Dr. Abushady is a crusader who looks forward to international brotherhood rather than international strife. He is the founder of the magazine and of the Bee Kingdom League, which is open to membership for beekeepers of every country. Such an organization can do much to forward international fellowship and good feeling. Success to Abushady.

Package Bees for Greenhouses

There is considerable comment in recent issues of the Market Growers Journal on the subject of package bees for the pollination of cucumbers grown under glass. The editor, Prof. Paul Work, is apparently looking into the subject with some care. There is a big potential market for live bees if a suitable package and proper methods of management can be worked out. Once assure the grower that his problem is solved and a new outlet will be available which will require a large volume of package bees.

Who Pays?

Our present system of taxation needs to be revised to make a more equal distribution of the load. If two men earn the same amount of money, one may spend it all and pay no direct taxes, while the other may save enough to buy a home and pay the share of both. The system now in use penalizes the thrifty man, who saves his money, by making him pay an unfair portion.

However, that is only part of the story, for every individual pays taxes indirectly. The heavy taxes charged against industrial concerns are added to the price of the goods they sell. Every time we buy a pair of shoes, a suit of clothes, a new machine or a piece of household equipment we pay a portion of the taxes which the manufacturers have been compelled to meet. When you and I and the rest of the common folks really understand that we are paying about 20 per cent of our income in taxes, whether or not we own any property, we won't be so enthusiastic about getting added appropriations for every kind of public enterprise which is proposed. It is a very popular idea that the Government can give us something, but the fact is that we must pay for it and add the cost of handling. When we overload the manufacturer with taxes he must add to the cost of the goods he sells, and in the end he has less jobs to offer and everybody suffers. Economists estimate that taxes now consume more than one-fifth of the entire national income, yet there will be more demands for appropriations for every conceivable kind of enterprise at the forthcoming congress than ever before.

Back to the Land

The back to the land movement is so definitely under way as to arouse comment in numerous publications. Investigation reveals the fact that a large portion of the landward-bound are in fact "back-to-the-landers" having left the farms during the boom period of easy money with high wages and short hours. Too often these folks are returning with far less than they went.

The indications are that the trend will be toward the open country for some time to come. Some of these folks are taking up honey production. In recent issues we have advised those in position to make use of them to buy the good beekeeping outfits offered at bargain prices. One extreme always follows another, and it won't be long until good outfits will be in demand again.

Compared with other industries, beekeeping is in a favored position. Honey has not declined in price to such an extent as other farm products and there has been far less capital loss in the value of equipment than has taken place in many manufacturing establishments. With the present tendency to return to direct sale of honey rather than to depend upon wholesale markets, the income of the beekeeper remains relatively higher than is the case with some other producers.



The bee yard is convenient to the cellar. The opening to the latter is at the corner of the building.

The Wintering Bugbear

Cellar Wintering—A Discussion Pro and Con

By C. H. Pease
Connecticut

THE first sentence in an article by Jay Smith in the September issue of *Gleanings in Bee Culture* reads like this: "The cost to beekeepers through winter losses is appalling." I have wintered a total of nearly five hundred colonies in the past nine years **without losing one**. Is this "appalling"?

As we all know, the two major bugbears of beedom are swarming and wintering. At this writing swarming is not troubling us here in New England, but the question is: "How are the bees going to winter?"

Wintering is a gamble with most beekeepers, but not with me; it is the least of my troubles. I have wintered a total of near five hundred colonies in the past nine years without the loss of one, and have done it at an expense of from one-sixth to one-tenth the cost of outside wintering.

I do not winter bees like most other people, and I suppose it is because, as my wife frequently tells me, I'm not like anyone else. While I winter in a cellar and many other beekeepers also winter in cellars, they are different cellars. I believe that practically all cellar wintering failures can be directly traced to an improperly constructed cellar, and, of course, the proper preparation of the bees before they go into the cellar. After two years of unsuccessful outside wintering, I became thoroughly

convinced that it was possible to construct a cellar in which ideal conditions could be maintained, regardless of all kinds of winters and outside hazards, every year, and that the losing of bees from wintering could be relegated to the category of lost arts.

With this end in view, I built a makeshift cellar by partitioning off a corner of our house cellar and began experimenting and studying the problem ten years ago, and have been learning something and making improvements every year since. However, crude as it was, I lost no colonies after the first year. As to the condition of the bees in the spring: If anyone can produce outside-wintered colonies stronger than mine, or that will build up better in the spring, I don't want them—I have enough trouble now holding back early swarming. And, besides, my bees consume an average of less than 45 cents' worth of sugar syrup per colony, instead of several dollars' worth of their finest honey. After the syrup is used up in April, they still have their full supply of honey, stored the fall before, which carries them through the spring brood rearing period and until the fruit bloom comes on. I was never guilty of robbing any brood chamber of one ounce of honey to make room for syrup, as the empty cells from late emerged brood furnish ample storage

for the little food needed for cellar wintering.

Wintering outside is full of "if" and "perhaps." Your bees are at the mercy of the elements—and who says the elements are not treacherous? The outside winterer expects good results IF the weather man lets his bees have two or three good flights during the winter; IF ice doesn't freeze the entrances shut; IF the stores hold out and IF they are of good quality; IF skunks or mice do not raise havoc with them; IF they are in a sheltered location; IF they are packed properly (and this is some job); and IF a few more "ifs" don't happen along unexpectedly. Not one of these "ifs" troubles my bees; they are all eliminated and all winters look alike to me, with one result: every colony a good one in the spring.

No, this doesn't mean an elaborate, expensive, underground, concrete cellar. My cellar (which will carry eighty colonies, although I have never wintered more than sixty-four) cost me in cash—"believe it or not"—less than the price of two colonies of bees for everything that went into it, aside from my own work, which was done at odd times (rainy days, nights, etc.); the lumber was all second-hand and had paid for itself in another building. Doubtless many could not get out of it as cheaply as that, but if it cost them ten times as much it would be economy. If new

lumber were used, the cheapest matched "roofers" is better than mine.

Evidently it is the idea of most people that a bee cellar is a rich man's luxury which the man or woman with a few colonies should not consider for a moment. That is why they say: "For the most of us a cellar for the bees would cost too much; we can't afford it." Nevertheless, I observe that the aforesaid "most of us" do afford outside wintering, which costs several dollars per colony, plus a percentage of losses, while proper cellar wintering costs less than 50 cents per colony for several years, last year it was less than 45 cents, with no losses. I can't quite grasp the philosophy of this reasoning.

My winter food expense has averaged less than 50 cents per colony for several years; last year it was less than 45 cents, and this winter it will be less than that, because I bought the sugar at only 4½ cents a pound. I weigh every colony when it goes into the cellar and when it comes out, and know exactly what each one consumes. I personally know of one colony within a few miles of our place, wintered outside

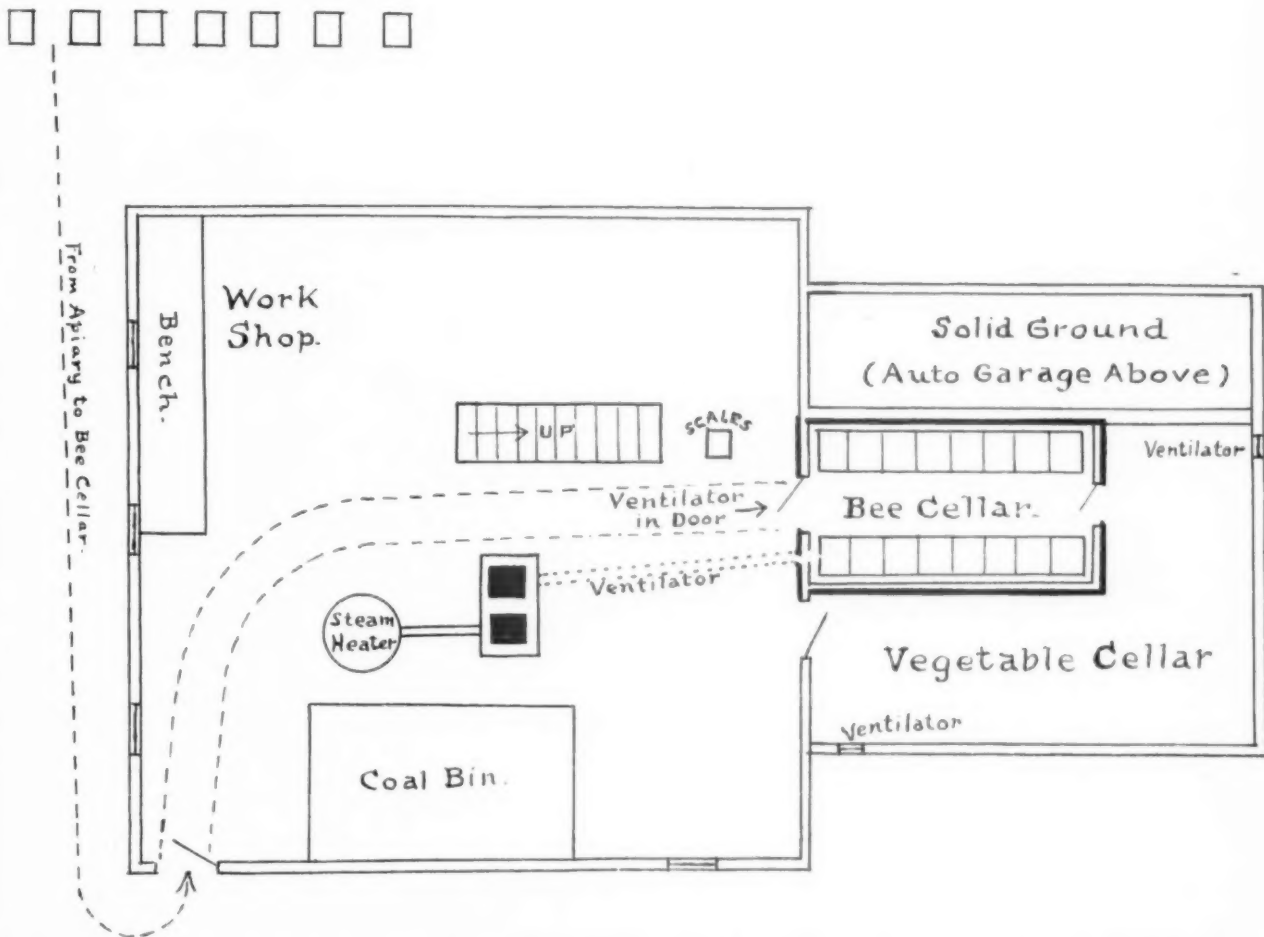
in two ten-frame hive bodies, that consumed or in some way disposed of every drop of honey in those two hive bodies and had to be fed in the spring, as the owner said they had "not one cell of honey in their combs and were starving." In dollars and cents it cost more than ten times as much to winter that colony outside as mine averaged in the cellar. Yes, that was an extreme and unusual case, but deduct 50 per cent and it's bad enough.

I wintered sixty colonies in my cellar last winter. If they had been outside I could not have hoped to pull them through on less than three dollars' worth of honey per colony; that means not less than \$180 for the sixty. As a matter of fact, it cost me less than \$30, a saving of more than \$150, and I can build several cellars like mine for that amount. More than this, the cellar expense comes but **once**; the savings come every year. You can't afford a cellar? I can't afford to winter outside.

According to an authority, here are some of the requirements of a good bee cellar: **"A cellar for bees must be far enough under ground so that the temperature will remain about 42° to 45°."** This statement

alone is enough to discourage anyone with a few colonies, who, of course, cannot afford such an expense. That **"must be"** permits no alternative, yet there is not one inch of ground over my cellar and I have not lost one colony of bees in nine years. My bee cellar is a part of my house cellar partitioned off, and three sides of it are wooden partitions, double, with air space between, and lined with black sheathing paper. The accompanying floor plan shows the exact arrangement.

As to the temperature to be maintained in the cellar: The bees tell me what they want better than any beekeeper can, and they do not always say "42 to 45°" either. If I could not get my cellar warmer than the 45° mentioned above, I would have a lot of very uncomfortable bees for awhile after they are put in. At that time they are perfectly contented at 48° or warmer, and I have had them absolutely quiet at 50°. One skeptical beekeeper who visited me just after the bees had been put in the cellar last fall saw the Wilder-tested thermometer inside at exactly 51° and the bees perfectly quiet. To do this, the cellar must have exceptionally good ventilation and all con-



A diagram to show the way the cellar is arranged and how located under the house. Note that the door shown in the picture does not lead right into the cellar

ditions must be **right**. As the winter progresses the bees buzz a request for "a little cooler, please," until, just before they are taken out, the thermometer reads about 42°.

"Good ventilation." Yes, indeed, everyone agrees that good ventilation is absolutely necessary, and in many cases success or failure is determined by adequate ventilation or the lack of it. With me, the definition of a good ventilator is three ventilators—one cold from outside, one warm from the heated part of the cellar, and one directly connected with the house chimney, which is slowly drawing air from the bee cellar continuously. This may convey the idea to some that it must be a confining job to be manipulating three ventilators all winter, but as a matter of fact they are seldom touched, and only when extreme changes of weather make it necessary. Eventually I anticipate installing a thermostat regulator to automatically take care of this. The little attention the bees require during the winter is a pleasure instead of an unpleasant task, and the beekeeper who cannot get enjoyment out of occasionally peeking into the wide-open entrances with a flashlight and seeing the clusters of solid contentment while the blizzards "bliz" outside has mighty little interest in beekeeping.

I have had arguments galore with outside winterers—and most of the beekeepers in Connecticut winter outside—and while some tell me that I am "lucky" to have a cellar that will carry my bees through in perfect condition, with absolutely no loss, I do not know of one who would make the effort that I did to bring that "luck" his way. I agree with Coleman Cox, who said: "I am a great believer in luck—the harder I work, the more of it I seem to have."

One beekeeper said to me: "What an awful job to lug all those bees in the cellar and then lug them out again in the spring." I asked him how much time it took him to gather the materials and pack his bees for winter, and at the average time per colony that he told me I put just sixteen colonies in the cellar, weigh them and record the weight, in the time he is packing one. Of course, this man may be slow, but if he worked twice as fast, I still beat him eight to one. As for the lugging part of the job, the wheelbarrow does most of that, as the hives are lifted on in the yard, two to a load, and wheeled directly into the cellar, and at the bee cellar entrance weighed and set onto their resting place for the winter. Not an "awful job" as I see it. And, besides, I do

not have to buy lumber, build, and store a lot of outside cases.

I always feed from ten to fifteen pounds of sugar syrup to each colony in October or early November, after all brood is out, with uniform results, but was told by one beekeeper that if he had to feed his bees he wouldn't keep bees. Of course, there is no law to prevent anyone from spending several dollars for 45 cents' worth of results if he wants to do it. If I lived in Texas, where they sell their honey for 5 or 6 cents a pound, I would talk differently, but honey is worth three times those prices in Connecticut.

I have kept bees twelve years. The first year I wintered three outside and lost one. It took me three years of experimenting and study to get my cellar anywhere near right, but it was well worth it. If the average beekeeper would spend half the time and effort studying the cellar-wintering problem that he does packing and unpacking outside, and **stick to it until he succeeds**, he would have a whole lot more honey, more money, and less dead bees in the spring.

I admit my cellar is not one of those orthodox, expensive, underground, concrete structures described in the books and magazines, in which a uniform temperature of about 45° is maintained. It suits me better, because my bees do not want a uniform temperature all winter; I give them the temperature that keeps them quiet. My cellar would be considered by some a crude affair, but it does the trick and will last longer than I will. It winters bees 100 per cent perfect, and has done it for nine years without a break. What more could I ask?

"Be Prepared"—A Good Motto for Increasing Production

By R. M. Baker
Indiana

PREPAREDNESS is one of the important factors in successful beekeeping and should begin the season before the crop. As soon as one crop is removed from the colony, especially in this latitude (Indiana), usually during the month of August, that is the time to begin to get ready for next year.

At this time all colonies should be carefully inspected, to note the condition of the queen and to make sure that no disease is present. If the queen is two years old, replace her with a good young queen. Any queen scattering brood at random over the combs, or a bit wobbly when walking around, should be replaced. Italian bees have proven their worth and I advise this race.

Any colony found with American foulbrood should be burned at once, with great care to prevent spread.

This should put the colonies in condition to go into winter quarters with 15,000 to 20,000 young, unworked bees. Then see that each colony has at least thirty-five pounds of stores of good quality. Give the bees the proper protection and they should winter perfectly.

So much for the bees. But the beekeeper's efforts have only begun, for while his bees are going through their long winter, he should turn his attention to the equipment he expects to use next year. Supers should be made ready; placed in a good storage room, covered from dust. If equipment is found broken, frames, section holders or separators, they should be replaced with new ones. Brood combs that have been damaged or contain an amount of drone-combs should be melted up for wax.

We should have five comb honey supers for each comb honey colony and five full-depth bodies for each extracted honey colony.

This is the time also to get new equipment, such as hives and supers, to take care of the increase at swarming time. This one point is much neglected by the average beekeeper and is sure to result in loss.

The farmer-beekeeper has spare time, too, now to assemble his new hives, and they should have three coats of good paint. Follow the directions in assembling equipment carefully. Do not be afraid to use nails.

Comb foundation is difficult to handle in cold weather unless you have a warm room in which to work with it. If you use plain foundation, however, you can wire the frames and have them ready. If you use wired foundation, this will not be necessary. In placing foundation in brood frames, never use less than full sheets. Be sure to fasten securely to prevent sagging or falling down.

To put foundation in sections, any method of melting a part of the wax against the wood will hold the foundation securely. Use top and bottom starters to insure a good section of comb honey which is fastened to the wood on all four sides.

A large amount of honey is lost each year because beekeepers do not have enough supers for the colonies at the proper time. No beekeeper can afford to let his bees loaf in the middle of a good honeyflow. This one thing is a decided factor toward success or failure.

Preparedness enables the commercial beekeeper to handle double numbers of colonies and the sideline beekeeper to care for his bees in one-half the time.

(The number of supers recommended may look too large, but Mr. Baker uses a small hive as compared with the Dadant. Better have too many supers than not enough.—Editor.)

Missouri State Fair

It would require more space than is available in this issue of the American Bee Journal to describe all the interesting things connected with beekeeping which were shown at the Missouri State Fair.

There was an extensive exhibit of honey and bees, together with honey cookery, in the Agricultural Building. There Miss Fischer, of the American Honey Institute, gave daily demonstrations of the use of honey in the kitchen. Miss Fischer also judged the honey cookery exhibits, which were larger than ever before. She was also invited to speak in the auditorium of the building occupied by the State Board of Agriculture and in the tent of the Missouri Ruralist, where she presented the honey story to hundreds of housewives who were visiting the fair.

There were fifty-nine honey cakes and twenty pies entered, which indicates a growing interest in honey cookery.

Clay T. Davis, of Columbia, was

superintendent of the honey show, and A. G. Woodman, of Grand Rapids, Michigan, judged the exhibits. It was said that this year's show was the largest and most attractive ever staged at the Missouri fair.

In the Board of Agriculture Building, Miss Brown baked hot biscuits which she served with honey, and her booth was a popular attraction, many hundreds of visitors being served each day. K. C. Sullivan, plant commissioner, arranged for a talk on some phase of beekeeping in the auditorium each afternoon. There was also an educational exhibit showing the life history of the bee and other matters of general interest.

The picture shows the prize winning exhibit staged by Leo Bradford, of Oregon. Mr. Bradford won a total of twelve ribbons. William Brengarth, of Slater, gave a live bee demonstration which attracted much attention and caused much comment on the part of visitors, who were amazed to see a beard of live bees. Mr. Ben-

garth won eighteen ribbons and took home more cash than any other exhibitor, although Carl Neef, of Boonville, won a larger number of prizes.

Leo Bradford had the largest amount of honey on display and came the longest distance to exhibit. Mrs. George Landes, of Lamonte, won the most prizes on honey cookery. Mrs. W. A. Scott, of Lamonte, also won a considerable number of prizes on both honey and honey cookery. Prizes were divided among about thirty exhibitors.

There was a total of \$500 cash prizes offered and \$117 additional in merchandise.

An Interesting Publication

The Ministry of Agriculture has recently issued an extensive bulletin entitled "Marketing of Honey and Beeswax in England and Wales." A book of nearly one hundred pages, it gives much useful information not commonly available. Those interested in the marketing of honey on a large scale will find this publication very valuable.

The first part of the bulletin is devoted to the composition and properties of honey, the supply at home and abroad, and a consideration of the demand. The second part deals with the preparation for market, quality, processing, grading, packing, etc.

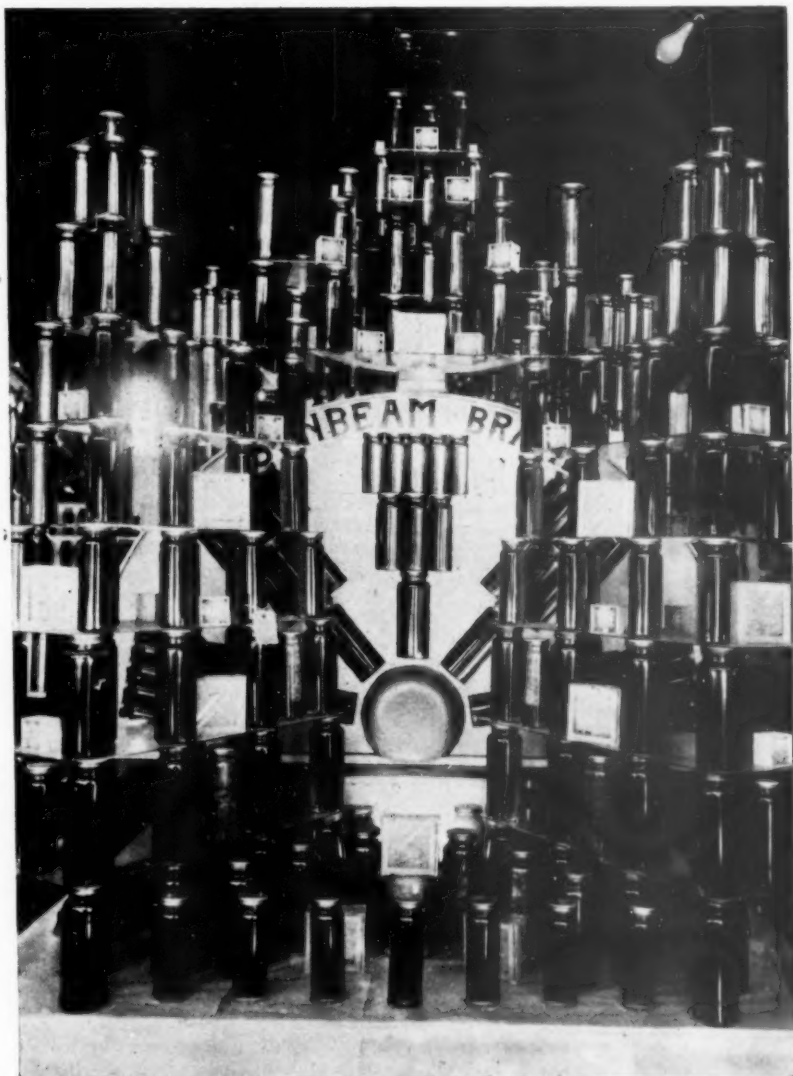
Part three deals with the wholesale market, cooperative marketing in Canada, New Zealand, Switzerland, United States and other countries, and an account of the New Zealand honey control board.

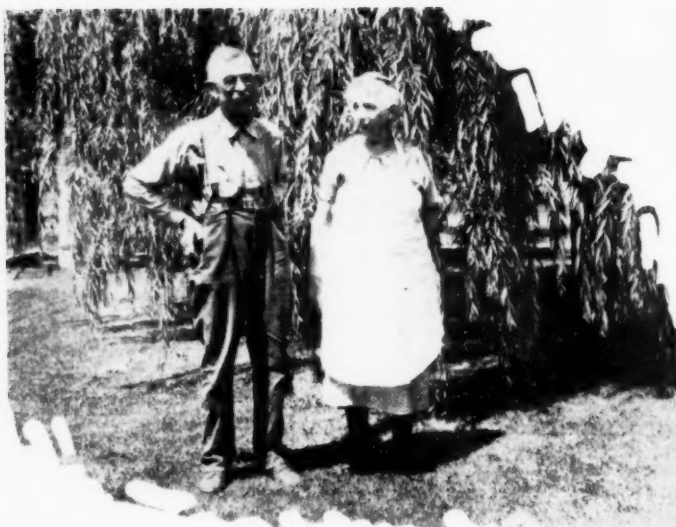
Part four is devoted to distribution through brokers, agents, importers, wholesalers, etc., and with publicity. Part five considers the problems of transport and storage, while part six is devoted to beeswax. Copies may be purchased from "His Majesty's Stationery Office," Astral House, Kingsway, London, W. C. 2, England. The price is 6d—postage extra.

Peat Moss for Packing

I wonder if anyone has ever used peat moss in packing supers? I am told that it is decayed vegetation and is shipped here from Germany. It is used on floors of poultry houses and is claimed to absorb enough moisture to equal fifteen times its own weight. I have never tried it, but it seems to me that it would be fine to use in the supers. A few inches deep would probably be enough, with the balance of the super filled with chaff or leaves. It would not be expensive, as it is very light and only costs about two and a half cents per pound.

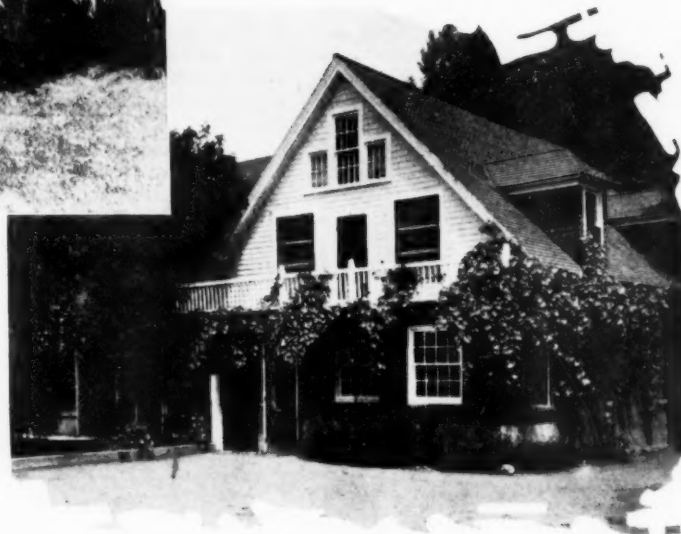
Leslie Stubbs.





Mr. and Mrs. Herman Rauchfuss, Sr.

Their home at Englewood, Colorado. A modern and fully equipped workshop is built into the back of the house, where scores of new devices have been constructed.



The Rauchfuss System of Queen Rearing—the Mating Nuclei

By C. L. Corkins
Wyoming

I BEGIN the task of presenting the great contribution of Herman Rauchfuss to the art of beekeeping with a feeling of trepidation. Not because there is any question as to its being practical, but I always stand in the presence of Mr. Rauchfuss with a sense of awe. It is hard to pass on without leaving out vital points in the knowledge which he has accumulated so others may not be successful in using his methods. I often wonder, too, if I or others have the ability, the knowledge and technique in a measure comparable to that of Mr. Rauchfuss himself.

With these questions in my mind, several years ago I decided to visit this "Dean of Rocky Mountain Beekeepers" and live with him long enough to find out something of the system of queen-rearing which he has developed in the past forty years. And let me say that any beekeeper who can do likewise will go away not only with a firmer foundation in practical beekeeping but with a sense of that peace of mind and restfulness which results from the hospitality of Mr. Rauchfuss and his good wife, which is touched with an environment that harks back to the Old World.

After using the Rauchfuss system of queen-rearing in our selective breeding experiments at the University of Wyoming and observing his results in both Colorado and in Wyo-

We have read this series by C. L. Corkins, University of Wyoming, with much interest. It has been in our hands some time, and we understand that the method of mating queens described by Prof. Corkins has been changed and that Mr. Rauchfuss now uses the method given by "Observer" in the July number. However, we are glad to give the account of the baby nucleus method here and how it is used, as described in the second of this series. Altogether we find it of great interest and originality.

ming, I can write about it with some confidence. It is to be regretted that Mr. Rauchfuss has not given his discoveries in beekeeping to the world and that someone less fitted than he must do it or have them remain hidden from our fraternity for a long time.

His reason for seclusion is so far removed from selfishness that the word should only be mentioned as an objective for contrast. He wants all who can to profit by his experiences. Yet he is almost inexcusably modest and feels that his contributions are unworthy. He feels also that he is not able clearly to express himself

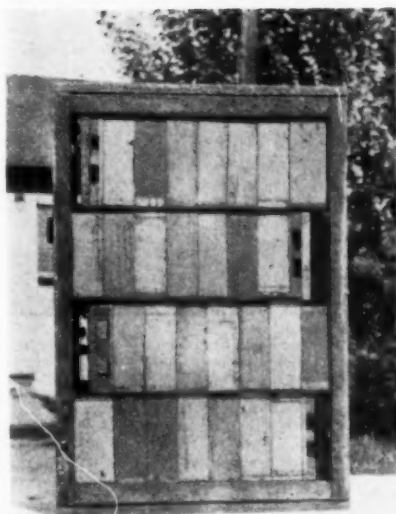
in writing, yet one may at any time have the most enjoyable experience with him, listening to his talk day in and day out, night in and night out, with a clear and well organized mind, in such forceful English that many a college graduate would be put to shame and envy.

I am certain that these preliminary remarks will be "blackballed" by Mr. Rauchfuss, but not by the editor.

The Mating Nucleus

The big feature of the Rauchfuss system of queen-rearing centers on his efficient and economical mating nucleus. It is the cornerstone of his method. The mating nucleus generally used in queen-rearing has not been advanced and simplified as it should be.

Much has been said about the advantages to the beekeeper of raising his own queens. But there has been a wholesale lack of so doing. The first principle, the extension specialists in education tell us, in getting people to adopt new practices is to remove as much as possible of the factors of time, labor and expense, reducing the practice to utmost simplicity. The expense factor is the greatest barrier, and I think the greatest disadvantage in all our old kinds of mating nuclei. It has been one of the serious barriers in the adoption of queen-rearing by hundreds of beekeepers who should make



A top view of the eight-frame mating nucleus, showing the position of the sections

it part of their system of beekeeping.

The two outstanding objections to most mating nuclei are that they require expensive equipment in addition to standard supplies, and if a large number of queens are to be mated in a short time, a tremendous amount of bees is necessary to fill the nuclei.

At the time the commercial honey producer chooses to raise queens, bees are precious in production. The requirement of two or three pounds of bees to mate one queen is a serious handicap. The southern queen breeders can "get away with it" because bees are more plentiful with them; they have more bees to sell than they have honey. Up North it is different.

The beekeepers of the South are the wholesale commercial queen breeders, and the beekeepers of the North are their regular market. That is no caprice of nature; no freak of

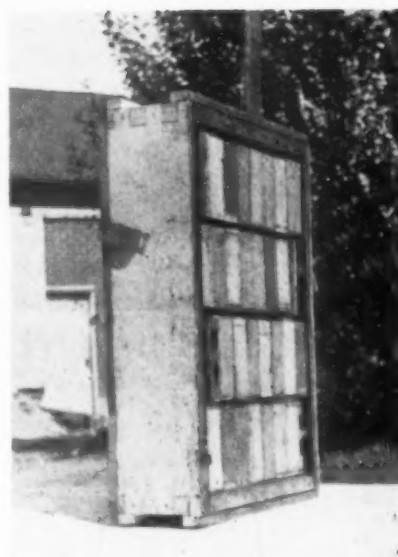
commerce. It is the result of natural economic conditions.

In the Rauchfuss mating nuclei there is advantage to the commercial queen breeder and the commercial beekeeper. Its outstanding features are: The use of scarcely any equipment in addition to standard supplies; second, only a bare quarter of a pound of bees is needed to mate queens successfully.

The Rauchfuss mating nucleus is the result of the principle that queens should be mated with a small number of bees. Beekeeping literature is filled with arguments for and against the so-called "baby nucleus." One manufacturer even adopted the old-style Rauchfuss baby nucleus, and many who will read this are familiar with it. In the hands of those not used to the principles of its use, widespread failure resulted. The use of the baby nucleus, therefore, has almost passed into history. The manufacturer had many of these "baby white elephants" on his hands. Mr. Rauchfuss bought them all and is still using them successfully.

A newer nucleus was made which is a modified adoption of the baby nucleus principle with far greater adaptability to ordinary practices and with a simple way of handling.

From the description here, and the pictures, any beekeeper can make them or have them made. They are constructed of standard $4\frac{1}{4} \times 4\frac{1}{4}$ -inch



A diagonal view, showing the entrances

comb honey supers, either eight- or ten-frame size. Mr. Rauchfuss uses eight-frame hives exclusively and we use the ten-frame hives at the university. Either size is adaptable.

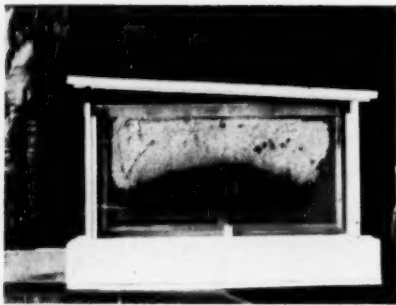
To prepare the super for the reception of the nuclei, strips of section retainer metal, one inch wide, are nailed around the entire edge of the bottom. Three division boards are

(Continued on page 471)

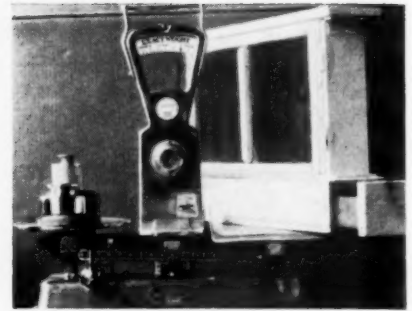


A Rauchfuss queen mating yard, with the nuclei in place. Top view shows Mr. Rauchfuss working with the nuclei.





Above: The display case ready to be weighed, with comb and feeder in place. The picture at the right side shows the same case being weighed with the bees inside. The scale must be accurate and sensitive.



The center picture shows the display, using as much package honey as the space allotted allows. Small placards giving interesting facts about bees and honey may be used to advantage in the display.

Selling Honey By Guesswork

By Natt Noyes Dodge
Washington

GUESSWORK in business is rapidly being eliminated, largely through the failure of such business men as attempt to continue its use instead of adopting modern accurate methods. There is a form of guesswork which may be classed among the scientific business-getting schemes. However, the business man doesn't do the guessing; that is left to the public.

For stimulating a guessing contest, nothing is more effective than an exhibition case containing bees on the comb. If such a case is placed in a conspicuous position where people congregate, the movement of the bees will immediately attract attention. The interest displayed by persons viewing the case of bees is contagious, and other people crowd about to discover the source of the excitement. Some one will remark in an awed voice, "I'll bet there's a million bees in that box." "Naw," another will contradict, "it just looks like a lot because of the way they move around. There ain't more than five hundred in there." A few more hazards and the contest is spontaneously under way. Provide a pencil, a pad of paper slips, a sealed box into which the "guesses" may be deposited; offer a substantial prize for the closest guess and other prizes for the three next best, and you have the makings of a contest which will arouse considerable interest in honey, make a number of honey sales, and pave the way for some valuable advertising to follow.

The beekeeper who packs and markets his own honey crop may make use of a display case and the guessing contest idea with very little ex-

pense. If properly carried out and followed up, it should stimulate his honey sales far in excess of the time and money expended. If he sells his honey through grocers, he will find them eager to cooperate with him in such a program, the grocers' windows offering desirable locations for displays. Such beekeepers as sell their pack from house to house may have a little difficulty in finding a suitable place for setting up the display, but by calling on various merchants will find one who is willing to provide space for the contest. A five-pound pail of honey will usually afford sufficient inducement, and many a merchant will see in the idea a scheme for attracting attention to his window so that he will give the beekeeper the space gratis.

In setting up the exhibition case, it is desirable to make as large a display of honey as is consistent with the space and an attractive arrangement as possible. Such a display of neatly labeled glass and tin containers will make a strong appeal to the appetite of the observers and will also familiarize them with the label. This is a valuable aid in the future sales work of the beekeeper. Neatly lettered placards should announce the guessing contest, stating that the number of bees in the case is the subject for guessing. Other placards may state that honey prizes are to be given to the four persons making the closest guesses. A neatly typewritten sheet of paper posted in a conspicuous place gives the rules of the contest, something like this:

Dates of beginning and end of contest.

Each person allowed but one guess.

Ballots must give full name and address of guesser.

Directions as to place to deposit paper upon which guess is written. (The box is preferably placed inside the store with paper and pencil handy. This serves to get the people into the store, which is what the merchant desires.)

List of prizes:

First prize—Five-pound pail of honey.

Second prize—Quart jar of honey.

Third prize—Pint jar of honey.

Fourth prize—Half-pint jar of honey.

Where and when the prize winners will be announced and the prizes distributed.

Since the actual number of bees within the display case is the crux of the contest, it is important that the beekeeper conducting the guessing program should determine as accurately as possible how many bees are in the case. This is apparently a difficult feat, and many persons viewing the display and dropping a guess into the box will be curious as to the method employed by the beekeeper in "counting" the bees. This very curiosity serves to keep up the observers' interest in the contest and contributes to the advertising value of the scheme. The easiest way to determine the number of bees in the case is by weight. It is, perhaps, as accurate as any practical method. Because the weight of a bee is so infinitesimal, a very delicate pair of scales is necessary. Few beekeepers have such a set, but sufficient inquiry will ordinarily reveal a pair that is graduated into fractions of an ounce. The display case is prepared ready

for the bees to be placed inside. Of course, the comb of honey and the feeder must be in the case. When all is ready the case is weighed very carefully and the exact weight recorded. A box is then prepared with a bee-tight cover and an opening in the side closed by a sliding door. The opening should be just large enough to fit around the end of the display case housing into which the feeder slides. With the door in the box closed, bees are shaken into the box from combs lifted from a well populated hive. If the combs are well covered with bees, the number clinging to two combs is usually sufficient to make an attractive display. As soon as the bees are shaken in, the lid of the box is closed and the box placed by the display case with the sliding door in the box against the open end of the feeder housing. It takes a little skill to open the door and insert the end of the display case into the opening in the box containing the bees, but is usually accomplished without the escape of more than half a dozen bees. The bees may be driven out of the box, through the feeder housing, and up into the comb chamber of the case by forcing smoke under the lid of the box, and, in addition, tapping on the sides of the box much as bees are "drummed" from a box-hive. In ten or fifteen minutes they will all be out of the box, which may be removed and the feeder immediately slipped far enough into the housing to effectively block the escape of any bees still loitering in the housing. The display case is then weighed again. The difference between the two weights is the weight of the bees, which may be translated into number of bees by a little figuring, taking as a basis that five thousand bees weigh one pound. The number of bees must not be divulged to anyone until the contest is over.

One week is usually sufficient for the contest to last, at the end of which time the box containing the ballots is opened and the guesses "counted." Letters may be written to the winners informing them of their good luck and asking them to take the letter to the storekeeper (if the display has been in a grocery store), who will present the prize. If the contest has stirred up sufficient interest, the prize winners may be announced publicly through the medium of a local newspaper, all of which provides more publicity for bees, honey, and the beekeeper.

Prize winners are naturally pleased and in consequence insist on the same honey in making future purchases. They are stimulated to further honey purchases by the taste of honey provided by the prize. Since all of the guesses carry the name and address of the guesser, the beekeeper has obtained a list of a number of per-

sons who were sufficiently interested in the contest to make a guess. These people, naturally, have been thinking of the contest, and incidentally of bees and honey, up to the time that the winners are announced. This list therefore offers a valuable opportunity to the beekeeper to put in some sales effort. If his honey is

distributed through grocers, a letter may be mailed to each contestant thanking him for entering the contest, expressing regret that each guesser couldn't win a prize, pointing out some of the food and health values of honey, and suggesting that he try some honey, making the purchase from certain grocers.

New Comb Honey Pack

The Kalona Honey Company, of Kalona, Iowa, has adopted a new package for comb honey which is finding favor in the retail market. Operating nine hundred colonies of bees, the firm is selling all honey at retail or through the trade, and also finds it necessary to buy some from other beekeepers to keep up with their demand.

To meet the demand for comb honey and still be able to sell in competition with extracted honey, they are using the invention of a member of the firm, E. H. Reif, and putting up bulk comb honey in a sealed package. The honey is produced in shallow extracting combs and cut into squares approximating a pound in weight. These are wrapped in cellophane after the broken cells are drained. The unique feature of the package lies in the sealing and backing with cardboard.

As the honey is cut from the frames it is placed on a drain board to catch the drip. Next the squares are wrapped and the edges of the cellophane neatly folded. The package is then dipped in melted paraffin to seal it completely and while

still warm each square of honey is placed on a piece of cardboard. The paraffine holds the wrapper to the cardboard and at the same time seals the package so perfectly that there is no messing from dripping honey.

Special shipping cases of corrugated paper hold twenty-four sections to each case. The finished product is very attractive and when placed on the grocers' shelves has outsold honey in any other form. This may be because it is something new, but the writer would expect the demand to continue, since there is no waste, no dripping of the honey, and when the wrapper is removed it is ready for the table.

A special observation hive is used to go with displays of honey in stores where it is on sale. Results of such displays have been very encouraging. One such, put up in a chain store where the manager was doubtful about selling honey, resulted in the sale of \$35.00 worth of honey in one day.

If care is used in sealing, there is absolutely no drip and the cardboard gives something to get hold of when handling the package. F. C. P.



Comb honey, cut from the frame, wrapped in cellophane, and mounted with paraffin on a cardboard backing.

A Cheap and Effective Disinfectant for Sterilizing Bee Combs Infected With American Foulbrood

By M. C. Tanquary
University of Minnesota

AMONG the various research projects in beekeeping that are being carried on at the University of Minnesota is one on the study of bee diseases. As a part of that project, and also as a part of his graduate work, H. G. Ahrens, instructor in beekeeping in the university, has, during the past two years, made an intensive study of *Bacillus larvæ*, the causative organism of the bee disease known as American foulbrood.

Many interesting results have been obtained, but, since these studies will be continued for a considerable period, a complete report cannot be published until later. Because of this fact, and because of its practical importance, it seems desirable at this time to give out to the beekeeping public one discovery that has been made in connection with this work.

Bacillus larvæ is a spore-forming bacillus, and in its spore stage it is one of the most difficult of all organisms to kill. It will resist for weeks the action of sulphuric acid, lye, caustic soda, and carbolic acid, and for months the action of cyanide gas, sulphur dioxide, and chloropicrin. Infected brood combs kept in a fumigating chamber with formaldehyde gas for a period of sixteen weeks still contained spores which germinated when placed on cultures.

A large number of disinfectants, both in liquid and gas form, were tested in trying to find one which would kill the organism and at the same time not injure the combs, and which would be so cheap that the treatment of diseased equipment would be an economical procedure.

Several disinfectants were found which partially met the above requirements, but one was so outstandingly superior in its effectiveness, in the ease with which it may be applied and in its cheapness that it is given here in preference to all the others.

This is chlorine, the same material which is used in purifying water in many city filtration plants, sewage disposal plants, and public bathing pools. It is also used by laundry supply houses to make bleaching preparations. It can be obtained in air-tight steel cylinders under pressure. It may be used to make chlorine water by releasing the gas through a rubber tube leading to the bottom of a tank filled with water. If infected bee combs are immersed in chlorine water, it immediately attacks the protein material in which the spores of *B. larvæ* are found and within a period of from six to twenty-two hours destroys the organism. The

longest period of immersion, after which growth took place in all laboratory tests, was twenty-two hours, but in practical application an immersion of forty-eight hours is recommended.

After laboratory tests had proved chlorine gas to be an effective killing agent, it was tested in the field, both in the experimental yard of the university and in a commercial apiary. A large number of heavily infected combs which contained many foulbrood scales were treated for forty-eight hours and placed in healthy colonies. During the past summer these combs all had several cycles of brood reared in them without any recurrence of disease.

In treating, the combs may be placed in an empty tank or vat which is later filled with water. No special effort need be made to secure penetration of the cells. All brood cells should be uncapped. If the combs contain some honey, but not enough to justify extracting, the honey should be uncapped and the combs immersed in water beforehand to get most of the honey out of the cells.

As the combs are removed from the tank after treatment, they should be shaken to get most of the solution out of them, and then allowed to dry until the chlorine odor has disappeared. They are then ready for use.

When the combs are first removed from the solution, the wax is quite brittle, but after a comparatively short time it assumes its normal consistency, and, after being in the hive awhile, there is no apparent difference between the treated and the untreated combs.

The chlorine solution slightly affects metal, and for that reason it is better to use wooden tanks or vats if one is going to use them for a series of treatments, but the corroding effect is so slight that it is insignificant where the tank is to be used for only a few treatments. Exposed wires, nails and other metal parts of equipment are very slightly affected.

Cost of Treatment

One pound of chlorine is sufficient to make 60 to 125 gallons of solution. Chlorine may be obtained in cylinders varying in size from 2½ pounds to 110 pounds, or even larger. The cost of chlorine varies according to the amount of equipment to be sterilized and to the efficiency with which the tank space is utilized. The actual cost of chlorine in treating will range from two-thirds of a cent per comb, if one is treating only a few supers, to as low as one-twenty-fifth of a cent

per comb in treating several hundred supers.

Warning

While a solution of the gas in water has no unpleasant effect on the skin, the free gas is irritating to the nose and throat, and contact with it should be avoided as much as possible.

Paraffin to Coat Honey Tanks

Honey tanks and extractors are usually made of galvanized iron, which is sheet iron coated with zinc. In time the slightly acid honey eats off the zinc and the bare iron is left. Honey coming in contact with iron becomes blackened, and even a small amount of iron rust will darken a considerable quantity of honey. To overcome this difficulty, we had thought of painting the inside of our tanks with duco and were assured by the manufacturers that it was non-poisonous; but paint or enamel of any kind is hardly suitable, as it is apt to come off, due to oxidation of the zinc. We did, however, coat the inside of one tank with water-glass (sodium silicate). It was fine until one night when the tank was left outside in freezing weather. The contraction of the metal caused all the glass to scale off. Later we used paraffin and have found it entirely satisfactory.

In coating a tank or extractor with paraffin, care must be used or the wax will not stick to the metal. Both the metal and the paraffin must be heated to a temperature above the melting point of the wax, but not so hot as to burn either the wax or the paint on the outside of the tank. To do this the metal is heated a little at a time by means of a blow torch and the liquid paraffin brushed or flowed on and melted in. It will not stick to cold metal. The paraffin should be heated in a small can inside a larger can or pan of water. When properly applied, the coating will last indefinitely.

E. S. Miller, Indiana.

Grains Pollinated by Wind

Tell J. H. Sturdevant of Nebraska that bees do not help pollinate corn or wheat, barley or oats, as all of them furnish a dry pollen which is scattered by the wind on everything in reach. Especially corn, the pollen of which is so plentiful that the whole stalk and even the ground may be covered with it. Bees gather it in damp weather while it can be packed, but it soon gets dry on a sunny day and then they can't gather it, but the wind scatters it on the silks and fertilizes it.

E. M. Johnson,
Wisconsin.

New San Bernardino County Apiary Regulations

Practically every county in California has an ordinance regulating beekeeping. Of special interest is a proposed ordinance before the Board of Supervisors of San Bernardino County to regulate, establish and maintain apiaries. The proposed ordinance in brief is as follows

"A county ordinance to regulate the establishment and maintenance of apiaries within the county; to provide for the registration and identification of apiaries; to provide penalties for violations; to provide for the establishment and rules for carrying out the provisions of this ordinance; to define 'apiary' within the meaning of this ordinance, and to provide registration and inspection fees."

The following interesting points are features of the eleven sections: It provides for apiary registration, permitting registered apiaries freedom of movement within the county on report to the office of the agricultural commissioner. Registration is renewable each year at a fee of one dollar. Identification cards accompany registration. These identification cards are to be posted in the apiary and shall not be transferrable except upon change of ownership.

It is to be a misdemeanor to keep an apiary not registered, to lend registration plates, to use a false name or address.

Any fees or penalties provided, if not paid, become a lien on the property. Delinquent fees, not paid within thirty days, shall be increased by a penalty equal to the original amount. All money collected to be deposited by the agricultural commissioner in the treasury of the county to be used for bee inspection.

An inspection charge of 15 cents shall be collected for any inspection made for bees upon which taxes have not been made.

David G. Sanborn,
California.

Honey-Avocado Bread

There may be something new under the sun, after all. At least there is something new in health food to be looked forward to. Although the time is not yet fully ripe for the announcement of his discovery, Mr. Charles E. Camm, of Santa Ana, California, the inventor of Honey-Avocado Bread, says that only legal technicalities stand in the way of offering his new health food to the public.

Privately, we are assured: "The use of honey, lima beans, soy beans with gluten flour and the avocado make a most wonderfully nutritious food. And, not only a real food, but its flavor has individuality; and it is

good to eat, which is not always true of the so-called health foods."

Certainly sounds "good to eat," but, somehow, it has an expensive sound, too. And yet, with the possible exception of the avocado, the ingredients listed are not very expensive. At least the prices of honey and wheat are not prohibitive, these days.

Rather interesting to notice how the popular taste seems to be drifting around to the good old standbys of common diet. People are gradually learning the real worth of some foods that were so common that they were neglected. Honey, for example. And then, the Chinese are teaching the world that soy beans are good for something besides stock food. Not much is yet known about avocado, but if mixing it with honey helps to sell the latter, beekeepers everywhere will look with a degree of favor on this little-known fruit.

Robert B. McCain,
California.

New Honey-Grading Regulations in Canada

The Department of Agriculture at Ottawa has formulated grades and grading regulations to be applied to honey offered for sale on Canadian markets, and passed under Order-in-Council May 15. The regulations are purely voluntary. No producer or packer must pack in accordance with the regulations; but should he do so, he immediately comes under the act and must conform to its requirements or be liable to its penalties.

It is hoped that beekeepers will use the grading regulations to obtain a uniform pack, for more orderly marketing, and to increase the confidence of the public in honey.

Samples of honey to be graded may be sent to the Bee Division, Central Experimental Farm, Department of Agriculture, Ottawa, where it will be graded and the beekeeper advised as to which class or grade it belongs.

The classes and grades shall be: Class 1, white; Class 2, golden; Class 3, amber; Class 4, dark.

Class 1, **White**, consists of honey in liquid form which is of a color corresponding to a reading of Lovibond glasses of Blue .30, Red 1.10, Yellow 3.10, when using a half-inch cell. This reading is equivalent to 32 mm. on standard Pfund honey grader.

Class 2, **Golden**, shall correspond to Lovibond Blue .20, Red 1.80, Yellow 6.80, equivalent to 50 mm. on standard Pfund grader.

Class 3, **Amber**, shall correspond to Lovibond Blue .30, Red 5.0, Yellow 21.0, equivalent to 85 mm. on the standard Pfund grader.

Class 4, **Dark**, shall correspond to greater values than Red 5.0, Yellow 21.0, or more than 85 mm. on the Pfund grader.

Definitions of Grades

Grade (a) **Fancy**—honey free from damage. Density not less than 1.435 on specific gravity scale. Free from foreign material and scum. When granulated it shall be uniformly smooth and fine. It shall be completely liquefied when sold as liquid honey. Shall not include honey of the minimum color of its class.

Grade (b) **Choice**—honey free from damage. Density not less than 1.435. Free from foreign material. Depth of scum not more than one-sixteenth of an inch in containers of less than sixty pounds and not in excess of one-fourth inch in sixty-pound containers. Honey of the minimum color requirements of its class. When granulated it shall be uniformly granulated and of medium to fine texture. If sold as liquid honey it shall not contain more than 5% of granulated except in glass, in which the honey shall be completely liquid.

Grade (c) **Manufacturers**. Shall include all honey not included in (a) and (b) and free from excessive foreign material and excessive damage.

Marking of Containers

All containers shall be conspicuously marked on the face or side with the name of the class and grade of the honey. When contained in cases, both the cases and the containers shall be marked. Markings shall be in distinctly legible block letters not less than one-eighth inch on glass, and not less than one-fourth inch in height on metal, and not less than one-half inch on cases.

No person shall offer honey for sale or ship honey or display honey so marked unless the quality of the honey is equal to or better than the class or grade marked.

All honey imported into Canada for resale in any form shall be distinctly marked with the name of the country of origin.

The minister of agriculture shall assign inspectors, to insure the carrying out of these regulations, who may enter any building or premises to make examination.

Nothing in these regulations shall obligate any producer to mark honey in accordance with them, but if the honey is so marked it shall be subject to the provisions of these regulations.

Nothing in the regulations shall prohibit the use of a trade name or a floral source, provided such names do not obscure the markings required or do not imply that the quality of the honey is better than that set forth. Also, where the floral source is stated the honey must be true to such source.



By N. N. Dodge

Bruin Refuses to Meet Joubert

J. P. Joubert, whose three bee yards are located near Enumclaw, Washington, has a rendezvous with a bear. Up to September 2, Bruin had failed to keep the appointment. However, he visited one or another of the yards almost every night, but never the one in which Joubert was waiting for him with a rifle. Joubert states that the bear is very courteous in his visits, as he refrains from demolishing more than one hive per night. Nevertheless the young beekeeper wishes that the bear would keep the appointment so that he (Joubert) could get some sleep.

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Paine on the Trail of Honey Clarity

Mr. H. S. Paine, in charge of the carbohydrate division, Bureau of Chemistry and Soils of the United States Department of Agriculture, was in the Northwest during the early part of August, traveling as far as the coast in Washington and Oregon. Mr. Paine is especially interested in the problems of packers of honey, particularly clarifying cloudy honey. He has developed a laboratory process of clarifying honey which gives remarkable results, and is now making an effort to perfect the process so that it may be used on a commercial scale. Mr. Paine believes that honey packed in glass will stand a far better chance of competing with the table syrups if it is brilliantly clear, a condition practically impossible to obtain with present systems of honey bottling.

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Heavy Spray Losses This Year

Mr. C. H. Shader, honey producer of Yakima, Washington, reports that losses of bees from spray poisoning have been especially heavy during the past summer.

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Mountain States Board Meeting

The annual meeting of the Board of Directors of the Mountain States Honey Producers' Association was held in Boise, Idaho, August 10 to 15. Although the association still held in warehouses a number of carloads of 1930 crop, the increasing number of inquiries, especially from Germany, indicated that much of this would be moved into export during August and September. Plans were formulated for the program of marketing the 1931 crop, which gave indications of being considerably short of the

1930 yield, with the greater portion of the honey grading darker. However, several producers reported good yields of water-white honey.

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Mosteller Goes Visiting

Mr. William Mosteller, of Casper, Wyoming, with his wife and dog "Brownie," made a long trip by automobile throughout the Northwest during August. The Mostellers visited beekeepers along their route through Idaho, Oregon, and Washington. They report their first taste of true locust honey at the home of Carl F. Buck, of Walla Walla, Washington.

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Bradshaw Honey Reaches Markets

On August 7 the first lot of 1931 crop comb honey reached the Portland and Seattle markets by truck. Mr. Douglas Bradshaw, of R. D. Bradshaw & Sons, brought the shipment from the Bradshaw intermountain apiaries. Although the Bradshaws report a poor crop of comb honey, due to slow honeyflows caused by the hot, dry weather, they expect to be able to supply their regular trade and to maintain their reputation of fifteen years' standing of placing the first new crop honey in Northwest markets each fall. The Bradshaws have also been packing extracted honey for the Portland, Oregon, market.

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Webster Studies Fireweed Pest

Dr. R. L. Webster, state entomologist of Washington, is much interested in the insect which has attacked the fireweed plants of the coastal areas this season, causing the flower stems to wither. He has been carrying on studies in the field in Skagit County and hopes to report definite progress in his investigations regarding the insect in the near future.

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Express Rates on Package Bees

A very important progressive step was taken in the movement to obtain reduced express rates on package bees when the fact-finding report of Messrs. F. E. Todd and F. H. McElfresh, Jr., was delivered to the Package Bee Committee of the California Beekeepers' Association recently. By action of the last convention of the association, the State Department of Agriculture and the State Bureau of Commerce were asked to cooperate in obtaining data

to be used in presenting the matter to the Interstate Commerce Commission. Questionnaires were sent to both producers and buyers of package bees, and the results of the analysis of the replies are now submitted.

The report reveals a careful and thorough study of the whole subject as far as available data would permit, and it reflects great credit on the two men named above, upon whom the burden of the work fell. Statistics of the package bee business are not abundant and the committee was at a disadvantage in trying to obtain information from prospective buyers. But producers of packages were unanimous in their response, and the analysis of the problem now in the hands of the committee will furnish a sufficient basis for future action.

The study of the problem was necessarily limited to the package bee business in California. It is understood that a like movement is well under way in the South. The production of package bees seems to be limited to northern California and some parts of the South. On the face of the matter, there does not seem to be any good reason why these two sections could not pool their interests and work together to accomplish their purpose.

Honey Selling Helps

By Alfred H. Pering

Not so long since, I had occasion to make a trip to Tampa, Florida. Tampa lays claim to being the most active city commercially in Florida. While the writer's "better sevenths" did her "window shopping" your humble servant passed some of his time in visiting leading retail groceries and the markets to look over the honey displays and to see if he could get some pointers on selling honey.

At one store the display of various kinds of "eats," put up in containers that, when empty, could be put to very convenient use by the housewife, was very striking. Quite a number of the containers appeared to be of much more value than their contents. Here in the sunny southland, where we have so little cold to interfere with the breeding and activities of ordinary pests, the good housewife finds it a great convenience to use various sizes and designs of vermin-proof vessels, especially glass vessels. Glass containers are easily cleaned and are the more convenient, as they readily show the amount of their contents. They aid in keeping tab on the supply and remind one when they should be replenished.

It appeared that almost all containers seen on the shelves of these stores and markets could just as well

be used as honey containers as any other commercial commodity. Vessels made with their opening large enough for the insertion of one's hand would add to convenience in cleaning and the removal of contents. A glass container for chunk honey, when emptied, could be used to store crackers, honey jumbles, doughnuts, etc. It appears to the writer that, if the glass manufacturers should have their attention called to the needs of the beekeepers in a sufficiently forceful way, they could design many containers that would be useful after the honey was removed.

"We" keep bees in summer and "we" also keep tourists in winter. Many of our winter visitors give very interesting accounts of how they or someone else keep bees. As our apiary is on a prominent public thoroughfare, it attracts its full share of attention. Remarks of the passer-by are often very amusing. We use a woven wire fence covered by grape vines to cause the bees to rise high before crossing the roadway. A visitor asked, "Why do you compel your bees to climb that fence?"

Not long since, a tourist related a method of beekeeping in bygone days, as practiced in the swamps along the Savannah River. The old-fashioned box-hives were in vogue then. An inch auger hole in the top of the hive furnished a passage into the receptacle for surplus honey. The receptacles consisted of neat, well-made, brass-bound cedar buckets. When the bucket was full of honey, the whole thing was sold altogether. From that statement I got a bright (fool) idea. I think I'll invert some quart glass containers over inch holes bored in inner cover, the inner cover to be placed just over the brood nest. If I live long enough to get the glass jars filled nicely, I'll send in a report of my success, or failure—?

Florida.

Scarcity of Bumblebees

It might be of interest to your readers to know that there are no bumblebees this year in this part of Oklahoma. This has never happened before. They have been always more or less plentiful. I missed them in the spring, and since that time other people, some as far as twenty-five miles away, have been on the lookout for them, but few bumblebees were seen.

There is no mistake about it, as by their great size and loud noise they cannot be easily overlooked. I know no cause for it. There has been a mild winter and an abnormal cold spring, but we have had similar seasons and worse ones before, with no such results with the bumblebee population.

Charles Hofmaster, Oklahoma.

Remington, Red River Valley Leader, Passes to Great Reward



W. W. REMINGTON

"Princes and lords are but the breath of kings—an honest man's the noblest work of God." Honesty, sincerity and kindness characterized this grand old man who passed away from our midst August 17. W. W. Remington, 77, Moorhead, Minnesota, prominent in civic affairs and known throughout the Red River Valley and many other parts of the Northwest for his activities in beekeeping and gladiolus raising, will long be remembered by those who had the good fortune to know him. In April, Mr. Remington suffered a stroke, and when apparently on the road to recovery he developed pneumonia and died.

President of the North Dakota Beekeepers' Association 1926 to 1928, and secretary of the State Honey Producers' Association for three years, Mr. Remington did all duties required of him and did them well. For several years he was a member of the staff of the Minnesota apiary inspection service.

For half a century an educator in Colorado, Mr. Remington came to Moorhead eleven years ago after retiring as head of the East Side Latin School of Denver, Colorado. In Denver's pioneer years he had organized the Fort Collins High School and acted as the institution's first principal.

He was for two terms president and for about twenty years secretary of the Colorado State Educational Association. He was born in Ohio.

On his arrival in Moorhead, Mr. Remington purchased a tract of ground on the outskirts of the city, where he kept an apiary of about one hundred colonies and began

growing gladioluses. Only the Red River separated his land from North Dakota. His bees had the range of fields of sweet clover, basswood and other bloom in season. At the time of his death he owned the largest garden of flowers for many miles around. He supplied the entire Moorhead demand and many of his flowers were distributed to Fargo and other cities.

He was long active in the Moorhead Rotary Club and was a past officer of the organization.

He was a graduate of the University of Michigan at Ann Arbor, and a member of Delta Tau Delta, literary fraternity.

Surviving are four sons, Hugh P., an attorney at Lisbon, North Dakota; O. S., connected with the immigration service in Grand Forks; Dr. Roe E. Remington, of Charleston, South Carolina, and Paul E., at Denver, Colorado; a daughter, Mrs. Dorothy Remington Webster, at Atlanta, Georgia, and a brother, Scott Remington, at Detroit, Michigan.

J. A. Munro.

Make Them Rich in Stores

Last spring I selected two ten-frame hives of about equal strength, with equal amounts of brood, and both with ample stores. On one I placed a second story of empty combs, on the other one of combs about two-thirds full of honey. About three weeks later the colony given the extra stores had about three frames more brood than the other, but as both colonies had been more than getting a living from dandelion, there could be no question of the one being short of stores at any time. The stronger at this time was getting crowded for room, so I removed three frames of honey and gave them three empty combs.

This confirmed the belief I had arrived at the year before, that a colony with a superabundance of stores will raise more brood than one that merely has sufficient stores for their needs.

Therefore, it is my opinion that it was not the extra room your correspondent gave them, but the twenty-five pounds of honey, that did the trick. It made them feel rich, that they could afford a larger family without incurring the danger of running into lean days ahead.

The questioner announced his intention of trying the idea on more colonies this year. I would like to suggest that he also supply some colonies with a body of empty combs, when he will, I am sure, prove to his own satisfaction that it is not the extra room, but the extra stores, that causes the extra brood rearing.

C. E. Sweeney, Ohio.



This picture, taken during the New Hampshire meeting in 1930, shows how lively things get sometimes. E. C. Wardwell, of East Kingston, is demonstrating how to transfer from a box-hive to a frame hive. On the left a little New Hampshire miss is getting some first-hand experience with amused onlookers to cheer her.

High Spots in New Hampshire Meeting

A new method of crystallizing honey into a smoother spread with improved flavor was explained by E. F. Phillips, professor of apiculture, Cornell University, at the annual meeting of the New Hampshire Beekeepers' Association during the recent Farmers' and Homemakers' Week at the University of New Hampshire.

While it calls for scientifically controlled conditions to be done most efficiently, he said, the average beekeeper can get good results by storing his honey in the basement in the fall when the temperature of this storage is at approximately 57 degrees.

An election of officers gave the presidency again to J. R. Hepler, associate professor of horticulture at the State University. E. J. Rasmussen, research assistant in horticulture, was also reelected secretary-treasurer.

W. E. Putnam, Hancock, is the new vice-president, and C. H. Pease, Marlboro, and E. W. Young, Temple, are new members of the executive committee. C. E. Wardwell, of East Kingston, was retained as a third member of the committee. Mr. Pease and Mr. Young replace G. C. Barton, state apiary inspector, and James Macfarlane, university florist, who were members of the executive committee last year.

The one-track mind of the honey-bee is the key to swarm control, Allen Latham, Norwichtown, Connecticut, another of the speakers on the beekeepers' program, declared. He

warned that whatever method is followed to control swarm "fever," it must be drastic to be effective.

"My plan calls for an extra hive for every colony," he explained. "These hives can be used repeatedly. When a colony is found with swarm fever, set two or three combs from the colony into a new hive, shaking more bees with these combs, and seeing that the queen is in the new hive. Of course, fill the spaces due to removal of combs with other combs or sheets of foundation. At the end of five or six days, remove all cells from the new hives and replace all the combs with brood into the permanent hive with queen and bees. Store the extra hive and combs. The bees will generally work on vigorously."

When persistent swarmers are not controlled by this plan, Mr. Latham advised killing the old queen and, a week later, or just before virgins are likely to emerge, removing all but one cell.

E. J. Rasmussen, research assistant in horticulture, University of New Hampshire, also addressed the bee men, speaking on "Our Partnership with the Fruit Growers."

A demonstration in requeening and handling bees was given by Mr. Latham. This feature was similar to one at their previous meeting, when E. C. Wardwell, of East Kingston, New Hampshire, beekeeper, demonstrated how to transfer bees from a box-hive and from a tree to a modern hive—Extension Service, University of New Hampshire.

Two Popular References to Bees and Honey

The June, 1931, issue of "American Forests" magazine, published in Washington, D. C., contained several very interesting references to bees. One was in the form of a major feature article dealing with the production of tupelo honey in the South. The description of the delicious flavor of the honey, in the first paragraph of the article, should cause many readers to make a honey purchase at the first opportunity.

Another reference to bees was in the form of a quotation from the "Baltimore Sun" describing an old cypress tree in Dismal Swamp, Virginia. A limb of the tree has for years been the home and storehouse for a large colony of bees, and in consequence is a great attraction to bears. The roots of the tree have sent up any number of sharp, wedge-shaped shoots, several feet in height, which surround the trunk to a distance of many feet. On one of these shoots a carcass of a bear was found. Apparently the bear had climbed the tree to reach the honey, but met with such a vicious attack from the bees that he fell to the ground and was speared by the sharp, sturdy shoot. Investigation of the undergrowth around the base of the tree uncovered the skeletons of six more bears either upon or very near these spear-like cypress knees.

Natt N. Dodge, Washington.



from the Little Blue Kitchen

Hallowe'en Is Coming

Hallowe'en is coming,
Want to know how I know?
Saw queer jack-o'-lanterns
Hanging in a row—
Saw them grinning, grinning
In a golden state,
Beckoning the hostess
Who would decorate!

Hallowe'en is coming,
Want to know how I guess?
Saw false faces hanging
Near a spangled dress,
And a front show window
In a shop near by
Had, right in the middle,
One big pumpkin pie.

Hallowe'en is coming,
Want to know why? Dear me!
Saw a fellow selling
Cider, knowingly—
Cider from the orchards
Of October's pride,
Sure to raise the "spirits"
When the witches ride.

Hallowe'en is coming,
Want to know how I know?
All these "signs and portents"
Tell me it is so—
Masks and jack-o'-lanterns,
Cats as black as night,
Goblins grinning till one
Almost DIES of fright!

L. K. W.

Honey 'Dainties for Hallowe'en

The beloved Hoosier poet gained quite a bit of his fame by his poem, "When the Frost Is on the Pumpkin and the Fodder's in the Shock," because everybody's interested in pumpkins and corn—one way or another.

When October comes around—October wearing her gorgeous harvest-home garments of purple and crimson and gold—there comes also a "hankering" for the fruits of the fields to appear on the dining room table.

All summer long, keeping pace with Nature as she moulded her beautiful fruits of field and vineyard and orchard, the honeybee has been harvesting her crop of luscious liquid sweet to "help out" where Nature didn't put quite enough pulchritude into her creations.

So many parties and other social events are scheduled for Hallowe'en—that witching, fascinating holiday with which old October makes her final bow before leaving the stage of the year! And at all of these affairs there are "eats." Among the things served is very frequently pumpkin pie. Now there are pumpkin pies AND pumpkin pies, but the Honey Lady's sister makes (according to the Honey Lady and her family, at least,) the most scrumptious and palate-satisfying ones ever baked! From "sister," then, she has wheedled the recipe, and is this moment going to pass it on to you, even giving you her recipe for the crust—a most important item. Every housewife has her own pie crust recipe, but this one is so exceptionally good I venture to print it, and suggest that the "blend-

ing with a fork" and the use of ice-cold water has much to do with the superiority of this particular pastry.

Lucile Laue's Honey Pumpkin Pie.

The Crust

Sift $1\frac{1}{2}$ cups flour, 1 level teaspoonful of salt, $\frac{1}{2}$ cup lard. Blend this with FORK. When thoroughly blended, add 3 tablespoonfuls of ICE water and blend in that. This makes enough dough for top and bottom crusts.

The Filling

1 cup stewed pumpkin (canned or fresh)
 $\frac{3}{4}$ cup strained honey
1 teaspoon nutmeg
1 teaspoon cinnamon
 $\frac{1}{2}$ teaspoonful of allspice
 $\frac{1}{4}$ teaspoonful ginger
1 cup milk
1 good-sized egg, beaten and added.

Mix all dry ingredients together thoroughly. Mix honey, pumpkin and milk thoroughly. Add beaten egg to liquid mixture, then add blended spices. Divide dough in two parts, roll out and use for top and bottom crusts. Place in hot oven on lowest grate of same, then turn gas down to moderate for twenty or thirty minutes or until set.

Honey Popcorn Balls

To Mrs. Lillian Hodge, of Mechanicsburg, Ohio, Honey Lady is indebted for this "kindly hint" as to how to prepare honey popcorn balls which would surely be a popular item for Hallowe'en party refreshments, espe-

cially in a small town or the country:

Take one quart strained honey. Place in an iron skillet. Boil until of a thick consistency. Have fresh popped corn ready and stir into the mixture briskly. When almost cold, pour onto thick paper and mould into balls with finger tips.

To add to the attractiveness of these balls, they should be wrapped in bright-colored tissue or in oil paper with outer covering of the pretty tissue.

Honey Taffy

Then it would be a lot of fun to celebrate Hallowe'en by an "old-fashioned taffy pulling." The difference between the taffy of other days, however, could be that honey be used rather than sugar and nobody present have any "tummy ache" or added pounds afterward. So here's a recipe for making this delicious sweet:

Boil strained honey until, upon testing, it hardens in cold water. One pound requires twenty minutes' boiling. Then comes the fun, for now everybody can take a hand in the "pulling." "Pull," says the formal recipe, "until white." Then the candy can be placed on plates to cool, according to time-honored custom, and later on in the party "devoured," as the cross-word puzzles always define the perfect normal act of "eating."

If sweet cider is to be served at a Hallowe'en frolic, then perhaps there will be doughnuts. If so, here is a fine recipe for

Honey Doughnuts

Sift one quart of sifted flour with one teaspoon of salt.

3 teaspoons of baking powder
 $\frac{1}{2}$ teaspoon of mixed spice
 $\frac{1}{3}$ cup strained honey.

Mix the honey with one beaten egg and one cup of milk and add to the blend dry ingredients; or use one-half teaspoon of soda and one cup of sour milk in place of sweet milk, sifting the soda with the other dry materials.

For richer doughnuts, add another egg and one tablespoon of thick cream or melted butter.

Little mother, do you know

(1) That honey contains acids which absorb fat in the intestines?

(2) That honey is better than castor oil for children needing a laxative?

(3) That honey has as much of healing quality as the tar with which it is mixed as a "cold" remedy?

(4) That honey contains minerals needed in the child's system?

(5) That honey can be substituted for orange juice on a child's diet when the fruit is hard to obtain?

(6) That, if baby has a weak heart, honey will strengthen its action?

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

WINTERING IN A ROOM

I have finished up a room with drop siding at the end of my porch, about eight feet square, with the intention of wintering my twelve hives of bees in it. I intend to place them on shelves four feet wide and three feet high. There is one small window opening to the outside, but no door. Will the bees fly in and out of this window if I leave it open, or will I have to take them out on nice days for a cleansing flight? Should I pack them well? I had thought of filling the space between hives with dry leaves, as I can get them handy.

My hives are all strong, with good queens and plenty of bees at present (ten-frame).
INDIANA.

Answer—I do not approve of putting bees in a room for winter and letting them fly out from time to time, for the following reasons: Bees learn the location of their hive and will return to that exact location. If you move the hive, some of the bees will be lost unless they have been taught that the location of their home is changed. Thus you will lose more bees after moving them than you would lose, most probably, if you left them on their summer stand, especially if packed in leaves.

If you can keep that room at a temperature of about 45 degrees the entire winter, you can retain them in it. But if it gets warmer, they will become restless unless you let them fly. If it gets colder, they will suffer more or less from the cold.

My recommendation would be to leave your hives on the outside, especially if you pack them with some shelter and keep the cold winds from striking the hives.

TARTARIC ACID IN SYRUP

I read in the Journal to feed bees sugar, that it is best to use tartaric acid. I would like to know if you heat it in the water, or how you mix it with the sugar. I have always boiled sugar to feed bees. Would like to know how you do it.

MICHIGAN.

Answer—The sugar and tartaric acid must be well diluted, whether you use hot or cold water. The use of hot water makes the sugar melt more readily. Some people use about 10 per cent of honey in the mixture, in place of tartaric acid. It keeps the mixture from crystallizing, and that is why tartaric acid is used.

Use only the best quality of sugar.

DRONE BROOD REMOVED

I have a colony of bees which for some reason was queenless and had all brood drone brood. I introduced a young queen on September 2, and this queen was laying in a few days and has some sealed brood, but every morning the bottom board is covered with dead young bees; they look like drones and are very white. I would like to know if the bees are killing the drones before they hatch, or if I have some foulbrood, as we have not had any foulbrood in this part of Kentucky. Kindly advise me how I can tell if I have foulbrood. If I send it to the experiment station at Washington, D. C., would I send empty comb or some of the brood?

KENTUCKY.

Answer—The brood you mention must have been drone brood produced by drone-laying workers. It will be all hatched out by the time you get this reply.

You need not be afraid of foulbrood. This disease is indicated by brood rotten in the cells. The bees cannot remove it, and when you try to remove a larva it pulls out like

india rubber and flies back into the cell. Those drones were for some reason killed in the cells before hatching. Perhaps they did not have enough food. If my surmise is right, you will begin to see worker bees hatch out of the brood nest before you get this letter, and everything will be all right. That colony will probably need feeding for winter. Look after it.

WINTERING A WEAK COLONY

Would a very weak hive of bees do the best in a steam-heated building, screen up, well supplied with honey, also fed sugar syrup, or placed in a cool cellar and have plenty of honey?
INDIANA.

Answer—The bees would be restless in a warm building and would soon wear themselves out trying to get out. The proper place for a weak colony is a dry cellar, at a temperature of about 45 degrees.

If the colony is too weak, it may not pull through even in the best conditions. Much depends upon the quiet and healthy conditions of the bees. The cellar in which they are should be dry, but the bees should have some ventilation so their combs may not mould.

WINTERING—OUTSIDE OR INSIDE?

1. Is it too cold to winter bees outside here, where it gets as cold as 40 degrees below zero?

2. Is it all right to winter bees in a cellar where coal, fruit and vegetables are kept?
MICHIGAN.

Answer—1. Bees may be wintered in Minnesota and northern Michigan if the hives are sheltered from the wind and kept in a sunny place. Better yet, you should have double-walled hives or packing on all sides but the south side.

2. Wintering in a cellar is still better, provided the cellar keeps a temperature of not less than about 45 degrees in the coldest weather and not over 50 degrees in warm weather. Too cold or too warm will not do. Usually a cellar in which fruit and potatoes may be kept is all right for bees, but they should not be exposed to the light and had better be kept behind a curtain of some kind so that they will not be disturbed when the housekeeper goes to the cellar. The hives should not be closed tightly, so that there may be air and evaporation of moisture. Put the bees in at the first cold weather of November and keep them in until a warm day in March or April. We have often wintered an entire apiary in this way. But in Illinois we have too many warm days when it is difficult to keep the cellar cool enough so the bees may be quiet.

FEEDING DARK HONEY

I have considerable dark honey which the bees gathered late this season. Wishing to feed some of it to the bees that are low in stores, which is best to feed it—whole or mix some water with it?

I generally mix water with dark honey when feeding it in the spring in brood rearing time, with good results, but for winter storing I do not know which is the best way to feed it. The honey is of the dark, sticky kind.
KANSAS.

Answer—I would not add any water to the honey to feed it to the bees. If it is good honey and not fruit juice or honey-

dew, I would just warm it a little and put it in the feeders. Do not delay in feeding it, as it is getting late.

It is all right to mix water with honey in spring, when the bees are rearing brood. But it will not do in the fall, when the honey is to be used for winter stores.

TO KEEP HONEY FROM GRANULATING

Will you please tell me what kind of a thermometer to use in heating honey? What temperature should honey be heated to keep it from granulating?

There is one of the neighbors here who sells honey that never seems to granulate, and it has never been overheated either, by the looks of it.

Is there anything that is not harmful that can be put in honey to keep it from granulating?

Do you test samples of honey to find if anything has been added to them?

Will you please send the answer by mail and not publish?
COLORADO.

Answer—Almost any sort of thermometer which registers between 100 and 200 degrees will do to test the heat of the honey. It is well to heat it over water "au bain-Marie," as the cooks call it, so that it will not get too hot in spots and will not burn at the bottom of the vessel. Heat it to 140 degrees.

We do not know of any preparation to put in that would serve the purpose of preventing granulation.

As to testing honey for purity, we rarely have any doubt about the purity of honey produced by beekeepers. They have too much trouble selling what honey they produce to try and increase the quantity by adulteration. So you need not worry on that score.

We believe that a heating to 140 degrees will prevent granulation.

COPPER TANK FOR HONEY STORAGE

How about a copper tank for the storage of extracted honey? As all advertised storage tanks are made of galvanized iron, I wonder if copper would be suitable. I have in mind a 60-gallon copper can I can get for little more than junk value if I can use it for this purpose.
IOWA.

Answer—A tank of either copper or galvanized iron will do if you will just paint the inside of it with hot beeswax. A little sweet tallow added to the beeswax will make it stick better. With such a coating, you need not be afraid of the metal having any effect on the honey.

You might also use a tin tank. But the tin which they make in this country, since we are so strongly protected by tariffs, is of very little value. They do not have to make good tin, for we cannot import any.

TOP PACKING

What, in your judgment, is the best winter packing that could be used to be placed between the inner cover and the top metal cover on a ten-frame hive? I know there are many things that could be used, such as dried leaves, burlap, waste, etc., but is there not some kind of felt that could be used, which would also serve as a good absorbent of moisture? This packing is to be used in preparation for wintering bees outdoors in one-story hives without other packing.
WISCONSIN.

Answer—The best non-conductor among all the packings recommended is cork chips. But cork chips are not easy to get. Wool waste, felt, or any other loose-bodied ingredient is good. Newspapers laid so there may be no air passing through are good. Forest leaves are good, because they do not permit the air to go through and still lie apart. Chaff is good, but more or less dusty and difficult to remove. Old carpets of wool or old clothes are good as far as they go.

The reason why we use forest leaves is that they are very plentiful right in the

apiary. But last year the forest leaves were wet and our people used straw. It did fairly well.

LATE TREATMENT OF FOULBROOD

I discovered today that I have in one of my hives a bad case of American foulbrood. Is there any way of treating them this fall? Would it be safer to pack them for the winter in a box by themselves instead of packing with another hive?

ILLINOIS.

Answer—The best time to treat American foulbrood is at the beginning of the honey crop, because the bees then have a better chance to recuperate, and also because there is less danger of robbing.

However, if yours is a bad case and you have some combs of honey or can get some, to winter them upon, you may be able to succeed in shaking them, if the colony is still strong.

Shake them into an empty hive with a dry comb or two, just enough so they will not feel like deserting. Then, three days later, put them on the combs of honey which you can spare.

In any case it is best to pack them by themselves for winter, as some of their bees might join another hive, if they are near it, and carry the disease with them.

The Rauchfuss System of Queen Rearing; Mating Nuclei

(Continued from page 461)

needed for each super, extending from side to side, 14 $\frac{3}{4}$ inches long for a ten-frame super by 4 $\frac{1}{2}$ inches high and made out of $\frac{3}{8}$ -inch lumber. A section retainer strip one inch wide is nailed onto the bottom of each division board, flaring over either side an equal distance.

This makes four nuclei in each super, each running from side to side. Four entrances must be provided, one on each side of the super and one on either end at opposite corners, the center entrance being two and one-fourth inches in from the outside of each corner. The side entrances are also six inches in from either outside corner. The entrances are bored with a three-quarter-inch bit, about half way through and finished with a quarter-inch bit.

An entrance closer and an escape are necessary. The closer is made of a half-inch block, two inches long by one inch wide, to one end of which is attached a piece of excluding zinc protruding about three-fourths of an inch. This device is then fixed below the entrance with a single nail so that when it is horizontal the entrance is open; when vertical with the block uppermost, the entrance is closed; and when vertical with the excluding zinc uppermost, the workers may pass, but the queen cannot.

The queen excluding zinc is used after the virgin has mated to retain her within the nucleus. This prevents her escape when the nucleus prepares to swarm, which it will, only a short time after the queen settles down to egg laying.

Four ventilators and four pressure blocks are needed for each super, one for each nucleus. Each of these blocks is the size of a comb honey section, 4 $\frac{1}{4}$ x 4 $\frac{1}{4}$ inches. The ventilator is made by tacking screen on a square frame made of $\frac{1}{4}$ -inch by $\frac{1}{2}$ -inch wood. It is made solid by tacking three strips of wood over the screen onto the square frame, the strips being $\frac{3}{8}$ x $\frac{1}{2}$ x 4 $\frac{1}{4}$ inches.

The pressure blocks are made out of 4 $\frac{1}{4}$ x 4 $\frac{1}{4}$ -inch wood $\frac{5}{8}$ inch thick and bound on two sides by $\frac{3}{8}$ x $\frac{1}{2}$ -inch strips. Ordinary super springs are used behind the ventilator and the pressure blocks to fasten them in place and hold the sections of the nucleus together.

The frames of the nuclei are 4 $\frac{1}{4}$ x 4 $\frac{1}{4}$ -inch sections. However, instead of being the usual width, they are 1 $\frac{1}{2}$ inches wide, because brood comb is to be built instead of section honey, and the wider sections cause trouble from brace and burr-comb. Two sides are scalloped, so when the sections are turned to the sides the nuclei are bee tight. Through the scalloped sides the bees gain entrance on either end. When through using the nuclei, the position of the scallops is reversed and the bees go down into the colony below without further handling.

In the eight-frame size, seven of these sections are used, side to side, from one side of the super to the other. On the end opposite the entrance the ventilating block is put behind the last section, then the pressure block with the stripped side next to the ventilator and all fastened into place with the two super springs. This all comes out nicely as to size, and when the springs are forced into the place the super may be handled roughly upside down without danger of sections falling out.

In the ten-frame hive, the actual space in the nucleus itself should be made the same, or else more than a quarter pound of bees will be needed to fill it. The six 1 $\frac{1}{2}$ -inch sections are put in, then the ventilating screen, then two dummy 1 $\frac{1}{8}$ -inch sections with the scallops in position vertically to allow a flow of air, and finally fixed in place with the pressure blocks and super springs. This works out just as snugly as the other.

Feeders are used with these nuclei made of 1 $\frac{3}{8}$ x 4 $\frac{1}{4}$ x 4 $\frac{1}{4}$ sections by boring a three-quarter-inch hole in the top, setting a 4 $\frac{1}{4}$ x 4 $\frac{1}{4}$ -inch block inside of one and a 4 $\frac{1}{4}$ x 4-inch block in the other. The 4 $\frac{1}{4}$ x 4-inch block is placed so there is a $\frac{1}{4}$ -inch entrance at the top of the sections through which the bees can reach the food. The hole in the top is for convenience in filling. A paraffined piece of thin, stout cardboard is fixed on a pivot at the top to open and close this hole. The feeders are dipped in melted paraffin to make them tight.

With an eight-frame size the feeder is used in place of the seventh section next to the screen. In the ten-frame super, it is used in place of the first dummy section, with the ventilating screen behind it.

It is important to place these feeders, or any section of honey used as food in their place, as far as possible away from the entrance to prevent robbing. Neither Mr. Rauchfuss nor I have ever seen bees rob one of these nuclei if handled this way.

The sections are placed in with the dove-tailed corners up. The starters are placed at the bottom of the section, not on the top, and are made of medium brood foundation about an inch high. Instead of starters, I prefer to graft in pieces of old brood comb. Also, when the nuclei are first used, I have found it advisable to graft in a couple of pieces of brood comb containing sealed brood only. Then, by using section honey or the feeders for food, absconding and drifting is practically eliminated.

Ordinarily two of these supers are used on each colony. The entrances of one super are at one corner and those of the other at the opposite corners, respectively. To retain their identity, one may be painted one color and the other a contrasting color, such as black and white. However, unless the beekeeper is crowded for a place, I think it better to use only one on each colony.

The nuclei may be put on top of the normally producing colony. They are separated from the colony by a queen excluder, or by an inner cover with a screen over the hole. In this way, should the weather turn cold, they are protected by the colony below, and they are not dependent on themselves alone for temperature. In hot weather the tops may be lifted and blocked to allow free ventilation.

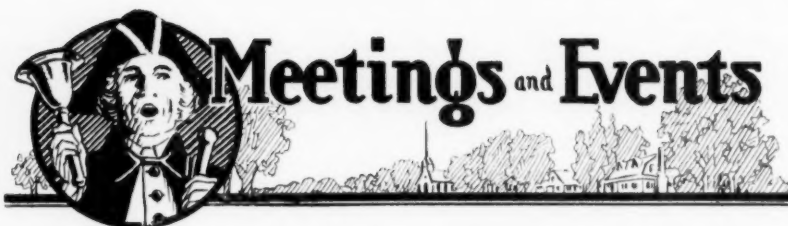
The actual filling and handling will be told in another article, but this much will suffice to show why the nuclei are efficient from the standpoint of supplies and the amount of bees necessary to mate one queen.

That Article on Honey for Baby Feeding

The article by R. B. Willson in our last number, page 409, "The Wonderful Results of a Magnificent Experiment," has drawn the attention of many readers all over the country, and the requests for reprints sent us for use have been numerous.

This article has been so changed in making the reprints that it can be used to distribute to customers, grocers, hospitals, diet kitchens, economic teachers, etc., to influence honey sales.

We still have a number of these reprints, which may be obtained for 2 $\frac{1}{2}$ cents each, plus postage.



Florida Elects Dr. Horton President

Dr. Waldo Horton, of Winter Haven, was elected president of the Florida Beekeepers' Association at the annual meeting, August 14. L. M. Lewis, Havana, was elected vice-president, and M. E. Darby, Zephyrhills, secretary and treasurer.

L. D. B.

Tennessee Convention at Athens

Approximately one hundred beekeepers of McMinn County, Tennessee, and adjoining counties held their annual convention August 14 on the farm of Joseph Dixon, four miles east of Athens.

W. L. Walling devoted the day to instruction on the latest method of bee culture. Mr. Walling told the beekeepers that Tennessee is progressing, rating third in bee industry and seventh in production. There are 200,000 colonies in Tennessee.

L. D. B.

Albert Koehnen's Apiary, at Tracy, Calif., Hit by \$30,000 Fire

Fire of an unknown origin, on August 20, destroyed the storage building and contents of the Albert Koehnen apiary, five miles west of Tracy, California. The building was filled with honey representing a value of between \$30,000 and \$35,000, over a hundred tons, together with equipment.

As the fire was in progress, two trucks arrived from Sacramento to take out four hundred cases, or about twenty-five tons of the honey, ready for shipment.

The equipment included motors and extractors, about one thousand hive bodies with combs, two thousand covers and bottom boards, and a new sedan valued at about \$2,000.

Insurance was carried on the building, but none on the honey crop, equipment or car.

Kirlin Honey House and Equipment Destroyed by Fire

Warsaw, Illinois.—The new honey house of the Kirlin Apiaries, just south of Warsaw, Illinois, in the Mississippi bottoms, was destroyed by fire recently with a loss totaling about \$5,000. The building was constructed in the summer of 1929 and had been occupied only a short time. It had the latest of modern equipment and facilities for handling honey. At the time of the fire there were also about a thousand supers, which had just

been extracted, in the house, the honey having been disposed of previously.

The owner, Harry Kirlin, attributes the loss to the accidental collapse of a stove on which wax was being rendered, during his temporary absence from the building.

However, Kirlin expects to come back into beekeeping as quickly as his resources will permit. The Kirlin Apiaries, numbering about three hundred colonies, will suffer for the fall crop without supers, but by doubling up and using the equipment on hand, a nice crop of fall honey will be obtained.

Licking County (Ohio) Picnic Delightful

The Licking County Beekeepers' Association held their annual picnic at Mound Builders Park, Newark, Ohio, on Wednesday, August 12, with seventy-five in attendance.

A basket dinner was followed by the meeting, with talks by Fred Muth, and Mr. Agle, president of the Ohio State Assembly.

J. W. Crawford was elected president; M. N. Brown, vice-president; C. P. Ruff, secretary-treasurer, and Sara Ruff assistant secretary-treasurer.

After the meeting there were contests, with prizes given by various merchants of Newark and by bee supply houses.

The Licking County Association heartily thanks those who made these contests possible by donations.

C. P. Ruff, Secretary.

Lions Club to Popularize Florida Tupelo Honey

The Tallahassee (Fla.) Lions Club has launched a campaign to popularize Florida tupelo honey throughout the United States and Canada. J. C. Perkins, president of the club, has appointed a committee to tender the 2,600 Lions clubs in the international organization a supply of the Florida honey at a special price.

A printed copy of a recent editorial in the Jacksonville Times-Union, together with a letter and an order blank, is being mailed out to every Lions club in the world, it was stated. The honey is offered at \$1.50 per gallon.

President Perkins stated that a profit of a few cents on each gallon will accrue to the local club, but that this money will be used for charitable

purposes. "The big idea," he said, "is to popularize Florida tupelo honey."

L. D. B.

Florida West Coast Group Launches Tampa Sales

Plans have recently been worked out for a cooperative system of marketing for distribution through the city markets in Tampa, Florida, of 15,000 pounds of honey produced in this section by the West Coast Beekeepers' Association. The honey went on sale at the markets on August 15.

The purpose of the sale, it was stated, is to clear the association's stock preparatory to starting a new season. Plans for the marketing were worked out by John H. Ireland, president, and George Schlegal, of St. Petersburg, secretary of the association, on a suggestion of E. D. Atkinson, secretary of the Hillsborough County Agricultural Society.

If the Tampa sales reach the proportions anticipated by sponsors, it will greatly increase the production of honey in this section. They predict that eventually the output will reach five hundred tons a year.

L. D. B.

Changes in Pacific Coast Personnel

Prof. George S. Vansell has resigned his position at the University of California, at Davis, to take a position with the new Pacific Coast Experiment Station, at the same university, in collaboration with the director, E. L. Sechrist, transferred in charge of that station from the Federal Bee Culture Laboratory at Washington.

Dr. J. E. Eckert, formerly collaborator with Dr. Sturdevant at the Bee Culture Field Station, Laramie, Wyoming, has accepted the position with the University of California vacated by Prof. Vansell.

This places California in possession of some of the best of Uncle Sam's bee men.

Loss of Young Rauchfuss Will Be Felt Keenly in Colorado

On page 429 of the September number was a notice of the death of Frank Rauchfuss, eldest son of Herman Rauchfuss. At that time we had no details.

Since then his sister writes that he was on his way home from the San Luis Valley, on the fourteenth of August, with a truckload of honey. He was taken sick, but managed to bring the truck in. A doctor was called and thought the trouble was from a stroke. After his death an examination revealed an abscess on the brain.

Illinois Summer Meeting

Illinois beekeepers held a very successful meeting at the home of State

(Continued on page 473)

Vermont Beekeepers Meet

The Clogston home, where the Vermont meeting was held



Mr. and Mrs. Clogston in a corner of the apiary

This year's meeting of the Vermont Honey Producers' Association was held August 15 at the home of Mr. G. L. Clogston, which is located about one-fourth mile north of Ely, Vermont, and only a few miles south of the camps and cottages of Lake Morey.

As this was on the east side of the state and most of Vermont's beekeepers are located on the west side, there was not a very large crowd, but the bunch of about fifty that did attend spent a very enjoyable day. Dr. Goss, of Wilder, Vermont, who has spoken on the health value of honey at the Vermont meetings for years, was present and gave another of his enjoyable talks. With a few thousand men as enthusiastic as the doctor scattered through the country, perhaps beekeepers could turn once more to producing honey and not worry about the selling end; in fact, I guess it would worry them to produce enough to fill their orders. Charles Mraz, secretary of the Vermont association, demonstrated the carbolized acid method of driving bees from supers. It seems to work very well. After placing the carbolized cloth in position above the bees, it is only necessary to wait a few minutes before one can remove the super, practically free from bees. This is cleaner than smoke and much quicker than escapes.

As a general thing, the production of honey throughout Vermont was cut about in half this season by excessive rainfall during the main honeyflow. Some sections expect a small fall flow, as goldenrod and asters are in fairly good shape. Mr. Clogston harvested about a ton of honey from forty-five colonies, spring count. Besides his bees, he runs a general dairy farm, with some berries and chickens also. Honey prices in general are not encouraging. Even with a short crop, prices range quite a bit lower. Many report that

fine clover comb honey which has retailed in the past for 35 cents is now being offered at 25 and even 20 cents. There has been some drop also in the price of extracted. It is felt that quite a lot of this is due to competition from New York State, as honey has been trucked in from there and sold to retail at what we used to get wholesale. With all due respect to members of the profession in other states, it can hardly be expected that Vermont beekeepers could look with favor on their dumping honey here.

The meeting of the Vermont Honey Producers' Association for 1932 is to take place at Burlington, Vermont, on the west side of the state.

Robert M. Mead,
Vermont.

Meetings and Events

(Continued from page 472)

Inspector A. L. Kildow, at Putnam, on September 10. There were beekeepers present from twenty counties. The ladies served a chicken dinner which was much appreciated and the subject of much favorable comment among visitors present.

The principal address was by Director Pierson of the State Department of Agriculture. The director commented on the present tendency to advocate restriction of production, but stated that in view of falling prices a larger output is necessary to meet the obligations of the producer. He expressed the opinion that restriction of output does not offer a solution of the problem. Rather, he would advocate well directed effort to increase production. By seeking new uses and new markets for farm products it would seem possible to create new demands to consume the surplus. He advised the beekeepers to follow this method rather than to consider reducing the output of their

apiaries, as advocated in some quarters.

There were several talks by speakers well known to Illinois bee men on topics of timely interest. A marked spirit of optimism was noticed and most beekeepers present reported at least a partial crop, with a fall flow in progress.

Rock Island County Meet

The bee men of Rock Island County, Illinois, held their annual summer meeting at the farm home of L. Weiss near Taylor Ridge. A sumptuous picnic dinner added much to the pleasure of the occasion. There was an interesting program of addresses, followed by animated discussion. Rock Island County beekeepers get together with a fish fry or picnic of some kind once each summer and have a day of visiting and discussion of mutual problems. It is a wide-awake organization.

1931 State Fair Honey Exhibits

The exhibits in the Apiary Division at the Illinois State Fair this year showed a considerable increase, with creditable exhibits being entered by the Macon County association and another by Cook County. The old standby exhibitors of former years, our veteran C. A. Stone of Farmingdale and Edwin Kommer of Andover, were also on hand, the latter carrying away most of the blue ribbons again as in 1930.

The Cook County exhibit was in charge of E. A. Wooldridge and Adam Bodenschatz, of Chicago. They had an especially creditable exhibit of artistic work in beeswax.

The Macon County exhibit was put on by C. F. Earle, proprietor of Earle's Golden Apiaries, Dalton City. Mr. Earle carried away a number of ribbons, which ought to entice him back to the fair again next year. He is a breeder of golden and three-banded Italians and he claims that his goldens are really hustlers.

The apiary exhibit was finally housed underneath the grandstand instead of in the Governor Emerson Building, due to a lack of space and proper arrangements for exhibiting in the latter building. However, we think it was a good idea to have the apiary exhibit in the same building with the Honey Culinary Division if proper plans could have been worked out.

The various items of the honey culinary premium list were well filled with entries, and several large cases of cakes, cookies, bread, muffins, and other food articles in which honey was used for sweetening were on display this year. The beekeepers of Illinois should be grateful to Miss Van Gilder, superintendent of the Culinary Department, for her efforts to popularize honey among the housewives of the state. Our state asso-

ciation provided Miss Van Gilder with honey recipes, and these were available to the hosts of visitors in the Woman's Building.

President Mackelden Appoints Committee

Because of apparent needed changes in the honey premium list of the Illinois State Fair and the Code of Rules for judging honey, President Mackelden has appointed a committee of three to revise and suggest changes to be presented for adoption or approval at the next annual convention in November.

The committee is composed of C. F. Earle, of Dalton City, chairman; E. A. Wooldridge, of Chicago, and Edwin Kommer, of Andover, all of whom were exhibitors at the State Fair this year.

Anyone interested in suggesting changes in the Code of Rules as printed in the back of the annual report or the present premium list is requested to submit these ideas in writing to the chairman, who will present all suggestions to the other members for consideration.

Illinois State Meeting, Nov. 17-18

The Illinois State Beekeepers' Association will hold its forty-first annual convention at the St. Nicholas Hotel, Springfield, Illinois, on Tuesday and Wednesday, November 17 and 18. The annual banquet will be held at 6:30 p. m., November 17. Arrangements are being made to secure prominent beekeeping authorities on various subjects. The details of the convention program can be secured through the association's bi-monthly bulletin or by non-members by writing to the secretary, 104 Vivarium Building, Champaign, Illinois.

The state association boasts of an actual membership on September 1 of 608 beekeepers, the largest in recent years and probably greater than any other state association. About 10 per cent are members-at-large, while the remainder are affiliated through twenty-nine local or county associations. These affiliated members enjoy the same privileges as the members-at-large, including subscription to the bi-monthly bulletin and the large cloth-bound annual report.

Five new associations have been organized since the last annual convention, and these as well as other associations have held one or more meetings in recent months. These include Shelby County, on July 18 and 31; Macon, on August 3 and 17; Stark, on July 9 and August 15; Cook-DuPage, on July 11 and August 15; Peoria, on August 3; Lake-McHenry, on August 9; Saline-Gallatin, on August 15; Stephenson, on August 9; Champaign, on August 14; North Central Illinois beekeepers, at apiary of Chief Inspector A. L. Kildow at Putnam, on September 10,

both Rock Island and McLean on September 11, and Woodford County on September 12.

Send Your Institute Honey Donations to These Receivers

These individuals and firms have agreed to take in honey donated to the American Honey Institute, sending a check to Russell H. Keltz, treasurer of the American Honey Institute, East Lansing, Michigan, for the value of the honey at the market price, less the freight:

Honey Receivers

Allen Latham, Norwichtown, Conn.
Bee-Kist Products, Inc., 8272 Jefferson Street, Phoenix, Ariz.

A. G. Woodman Company, Grand Rapids, Mich.

Dadant & Sons, Hamilton, Ill.

James Gwin, Department of Markets, Madison, Wis.

Lothrop Nursery Company, Aberdeen, S. D.

T. W. Burleson, Waxahachie, Tex.

O. S. Bare, Extension Entomologist, College of Agriculture, Lincoln, Neb.

Sioux Honey Association, Sioux City, Iowa.

H. M. Krebs, Sacramento, Calif.

Above receiver nearest you is to be notified of the number of pounds you contemplate sending in before shipment is made.

Tupelo Honey Finding Good Acceptance

Honey producers of Franklin County, Florida, will soon be able to place upon the market large quantities of pure, white tupelo honey in glass containers of a size suitable for the retail trade. Specially designed labels depicting tupelo honey in various stages of development have been ordered, and bottling operations will begin in the near future.

Recently Anthony Brothers shipped a quantity of tupelo honey to be used in the dining car service of the Seaboard Air Line Railway. Railroads are finding tupelo honey especially suited for table use. Inquiries concerning this delicacy are being received in Apalachicola daily.

L. D. B.

Details of Death of C. O. Yost

Mr. C. O. Yost, chief inspector of apiaries in Indiana, secretary and treasurer of the Indiana State Beekeepers' Association, was severely injured in an automobile accident on State Road 67 near Fortville, Indiana, July 3. He was given first aid in Fortville and later removed to the City Hospital in Indianapolis, where he died the evening of July 6. His

funeral was July 8, with burial in Floral Park Cemetery in Indianapolis.

Mr. C. O. Yost has been with the Department of Conservation, Division of Entomology, for fourteen years, and served as an inspector of apiaries. He was mostly responsible for the splendid system of inspection in Indiana today, and his tragic death has been a great loss to the beekeepers of Indiana. Mr. Yost was known and liked by many beekeepers from other states, and they, including several hundred Indiana beekeepers, will miss him as we will who have worked with him.

At present the writer is serving in Mr. Yost's place. There has been no definite appointment to the place as yet. It will indeed be hard to find a man that will pick up where Mr. Yost left off and carry on.

Benj. H. Wilkins.

Hopper Bait Not a Menace to Bees

I noticed your announcement of the great concern among beekeepers in the grasshopper region lest poisoning of the hoppers will cause poisoning of the bees also.

In the Salt River Valley hopper poisoning has been practiced on a big scale in the last two years and I have not heard of any complaint from beekeepers because of it, although many hundreds of colonies were killed last year by cotton dusting carried on by airplanes. Arsenical compounds were used for this.

I have poisoned grasshoppers in a small way just outside my home yard, but never saw a sign of menace to the bees. Most formulas for this poison are essentially the same: a small quantity of arsenic or paris green, thoroughly mixed with bran, moistened with molasses and water, flavored with banana oil or chopped oranges.

I used unmarketable honey instead of molasses. The bran and liquid should be thoroughly mixed and should have just enough moisture to make the bran damp. This is best done in the evening, the mixture spread over hopper-infested area the following morning as soon as the insects begin to become lively.

If the weather is cool and the bait is spread too early, it may dry so much before the feeding time of the hoppers that its effect is lessened. The effect is not apparent immediately, but is exceedingly lasting.

There are still numerous bodies of grasshoppers here that were poisoned a year ago, the arsenic seeming to have a mummifying effect on them. I have heard of chickens dying from eating poisoned hoppers, but there seems to be not the least danger of poisoning bees if the bait is scattered thinly as recommended.

H. E. Weisner, Arizona.

Inspector Frank Bishop Passes on at Taylorville, Ill.

Frank Bishop, one of the best known beekeepers in the state of Illinois, passed on at Taylorville, Illinois, September 3, after a short illness with angina. Mr. Bishop was a deputy state inspector, a beekeeper of considerable information and ability, and one of the consistent exhibitors and prize winners at the state fair at Springfield, Illinois.

Mr. Bishop had nothing but the best of equipment in his apiary, numbering between 150 and 200 colonies, and the quality of honey he was able to display in his various exhibits always marked him as one of our best producers. He is survived by his wife and two daughters.

New Zealand Crop One-Half Normal

The honey crop in New Zealand was from one-third to one-half normal in most areas this year, because of unseasonable weather. It is thought there are enough stocks in London, however, to cover sales until the next crop of Dominion honey.

During the 1930-31 season the number of beekeepers in New Zealand fell below 7,000, although the number of colonies increased to 104,000. Prices remain at about 9 to 11 cents per pound in quantity.

A Missouri Bulletin

A bulletin entitled "Beekeeping in Missouri," by Dr. Leonard Haseman, has recently been published by the State University at Columbia and may be had free on request.

The bulletin contains fifty-two pages and deals with the material most likely to be useful to the beginner. Beginning with a consideration of the bee colony and its organization, it touches on the anatomy of the worker bee, the cycle of activity, proper manner to handle bees in such operations as uniting, feeding, transferring, preparation for winter, etc. There are several illustrations.

"Pinex" Recommends Honey

The PINEX COMPANY of Fort Wayne, Indiana, are another firm recommending honey because they believe it is good for what ails you. In their recommendations for making "Honey and Tar Cough Syrup" they say: "Place contents of bottle of PINEX (2½ ounces) in a pint bottle and add enough honey thinned with a little water to fill the bottle. Mix well."

The outside carton for their bottle of "PINEX," as well as directions on the bottle itself, recommend honey in combination with it for efficacy.

ROOT QUEENS

We have some extra fine young laying Italian queens, just raring to go. If you need one or more queens to put into queenless colonies as you check over your bees for winter, we can supply you promptly.

Queen Prices — Postage Paid from Medina			
Untested	Quantity	1 to 9	10 to 24
		\$1.00 each	.90 each
			25 or over
			.75 each

Customers outside U. S. A. and Canada must add 25c per queen to above prices to cover extra postage and cost of larger cages. Queens shipped to foreign countries at customer's risk.

NOTE — Our Untested Queens are young laying queens reared this season, that are practically all purely mated and sold when mated.

THE A. I. ROOT COMPANY - - MEDINA, OHIO



A Better Method

Regardless of what system you are using to dry cappings, the WHIRL DRY method is better.

This machine runs all day silently, requires very little power, and will thoroughly clean the honey from the cappings immediately, before they lose the heat imparted by the hot knife.

It may be used with one or two men uncapping, or with an uncapping machine. The honey will be equal in quality to that which comes from the extractor.

No messy job when the day's extracting is over; just loosen two thumb-screws, lift off the top-bar and dump the removable cappings basket.

Manufactured only by

S. P. HODGSON & SONS

New Westminster

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QUEENS

35c Each

3 Queens \$1.00

I will have young queens to offer thru early November. Send me your order today.

GULF COAST BEE CO.

Walter T. Kelley, Prop.

HOUMA, LOUISIANA

FALL BARGAIN PRICES ON MOUNTAIN GRAY CAUCASIAN QUEENS

Bred from record producing stock. Tested, \$1.50. Select Tested, \$2.25

Write for full description and prices on untested. Every queen guaranteed to please or we will buy them back. Prompt delivery. Health certificate with each shipment.

BOLLING BEE COMPANY, BOLLING, ALABAMA

Telegraph and Shipping Point, Bolling, Alabama

A Bee Paradise

Minnesota, North Dakota, and Montana, Idaho, Washington and Oregon are developing rapidly in beekeeping and honey production. Thousands of acres of sweet clover and other valuable honey plants promote high yield and fine quality. Much good territory remains to be occupied.

Beekeeping may be developed profitably as a sideline with diversified farming and livestock or as a specialized project. Conditions are equally favorable for bees and livestock. The most valuable feed and forage crops are easily grown and production cost is low.

Beef cattle, dairying, sheep, lambs and wool are all produced on a low cost basis on low priced land. Among the most favorable localities for bees and livestock are the Red River Valley, Milk River Valley, Lower Yellowstone Valley, and Valier Project.

Write for free book on either state and detailed information about bee raising and farming opportunities. Low Homeseekers' Round Trip Excursion Rates.

E. C. Leedy, Dept. J.

GREAT NORTHERN RAILWAY
ST. PAUL, MINNESOTA

Yancey Hustler Queens

Three-Band
Italians

35c EACH BY THE HUNDRED; ONE TO NINE, 50c EACH; TEN OR MORE, 45c EACH;
TWENTY-FIVE OR MORE, 40c EACH

2-lb. package with queen ----- \$2.00

3-lb. package with queen ----- 2.50

WE GUARANTEE TO PLEASE YOU ON EVERYTHING

CANEY VALLEY APIARIES

- :: -

BAY CITY, TEXAS

The Cardinal-Flower



Yesterday, while tramping among the gorgeous pink blooms of our Mississippi Valley heartsease and among the vivid yellow of the Spanish needle, I came across a patch of Cardinal-Flower larger than any before seen in rambles of this kind. It was a beautiful blaze of red, inserted among the yellow and pink like a huge bed designed under a florist's hand.

The Cardinal-Flower, or Lobelia, is a humming-bird flower, and, according to Pellett, not suited to the honey-bee. Bumblebees visit it freely, but honeybees are only chance visitors, since under normal conditions they cannot secure the nectar. However, the flower is often associated with the two wonderful honey plants named above.

The Cardinal-Flower will persist until a really brutal frost clears all the blossoms. Its little jets of flame shine out of the dusk of shaded ravines or moist lands. It occasionally produces a white-flowered specimen, and once in a while a rose-red one.

It is predominantly a plant of eastern North America, where it is found from New Brunswick to Ontario. It burns in the ravines of Pennsylvania and Maryland, and is frequently the only conspicuous flower in the swamps of Florida.

Kansas City Street Car Gives Free Ride to "10,000 Bees"

W. H. Eastman, of Kansas, sends us the front page of the Kansas City Star for June 19, in which the first article is about a huge swarm of bees which surged into the downtown district and completely disrupted the morning's work.

"There was need for both 'Lightnin'' Bill Jones and Maurice Maeterlinck at Eighth Street and Grand Avenue that morning. From somewhere out of the blue sky a great army of honeybees descended on the town like Milton's locusts, 'warping on the wind.'"

Quoting from the paper: "They buzzed in regiments about the office windows, swarmed by the thousands around street cars, drew up in curious array in front of windshields, but strangely enough their intentions, whatever they originally might have been, were not unfriendly. They

Beekeepers Take Notice

For thirty years we have specialized in the manufacture of **Sections** from the whitest selected Wisconsin basswood.

We also manufacture hives, supers, frames and shipping cases.

Write for our free illustrated catalog

Marshfield Manufacturing Company
Marshfield, Wisconsin

seemed to be just pausing at one of the stages of some mysterious invasion—some scientific investigation of their own—perhaps just an organized flight from drought-stricken regions to new pastures or fresh honeysuckle forests.

"The cloud of insects were first seen at Eighth and McGee streets. Then it moved on as far as Grand Avenue. An eastbound Northeast street car was enveloped with the swarm. The motorman hurried through the door, and the bees also. He closed the windows and carried what he says were '10,000 bees' as far as Locust Street. When he opened the windows the bees hurried back to join their comrades.

"Before people learned of the swarm and avoided the place, the whole section was a picture of flapping arms and swinging newspapers. One girl stepped off a street car, took one look at the buzzing mass, threw her skirts over her head and vanished into the Federal building.

"A Federal Reserve Bank money car, all armored with steel and with a guard inside holding a loaded rifle, was caught in the jam, and the guard was just as helpless as anyone else. The bees crawled in through the loopholes, crawled over the guard and the money, and even looked into the rifle barrel."

In the paper follows a column of comments by different citizens who were besieged by the inquisitive swarm. They went into the barber shops, into the clothing stores, into tailor shops, swarmed over an ice cream truck, on the mail trucks. Albert Pelofsky, newsboy on the corner of Eighth Street and Grand, said the bees "had the women almost panicky." V. C. Gardner, assistant postmaster, who was bred on a Clay County farm where the swarming of bees was a common event, reports: "I had to answer the questions of many persons. One old Negro woman asked, 'Is it flies?' I told her they were honeybees. She gave one long gasp and ran."—Kansas City Star, Friday, June 19.

Facts About Honey

The University of Washington is after facts about comb honey. About a year ago experiments were begun in the chemical laboratory at the university which were expected to reveal interesting facts about comb honey. Since then we have not heard a statement of their results.

Honey is a highly specialized product with many qualities not common to other sweets, and our hope for a market lies in bringing the facts about honey before the consuming public. Just what are those special qualities? That's what we need to know.

J. H. Sturdevant, Nebraska.



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Dependable Service on Standard Sizes

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(This organization cooperating with American Honey Institute, Indianapolis, Indiana, for National Honey Week, November 9 to 14)

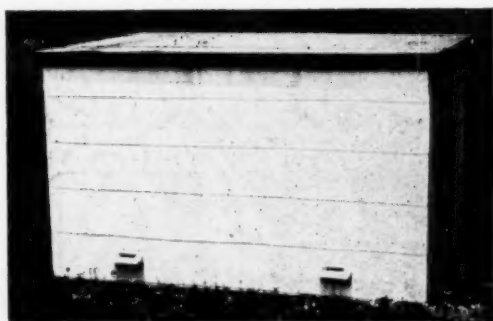
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Working Your Wax Into Non-Sag Brood and Super Foundation for You for Cash

Prices of wax are very low, and so of course will be on foundation. We do not, however, offer price as an inducement, but merit only. Last two seasons have established and proven the merit of our claim for our Non-Sag Brood Foundation. For 1931 we submit the further improvement of making our Medium Brood two standard widths—8 1/16, seven sheets to the pound, and 7%, eight sheets to the pound.

Write us for samples and prices

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Let This Case Solve Your Wintering Problems

No heavy lifting.

No confused bees.

A great time and labor saver.

Durable, wirebound construction; built to last for many years. Galvanized wires.

Our folder, which fully illustrates and describes our trouble-free, Copyrighted Packing System, sent free on request.

Two-colony size, 46x32x28" deep; weight per case, 58 lbs. Price complete, ready for use, each, in lots of four, \$1.90.

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Selling Helps for Your Honey

Beekeepers are learning to sell honey locally, thus avoiding the glutted central markets. Our honey folders are ideal in this respect, and for distribution at roadside stands.

HONEY LEAFLET



Four pages; cover in four colors. Explains fully but briefly the value of honey, its uses, and gives a few recipes. Name and address of beekeeper with honey prices if desired. Fits ordinary envelope. Sample free.

Prices postpaid with name and address, etc.:
100, \$2.00; 250, \$4.25; 500, \$7.50; 1000, \$11.50

Each additional 1000, \$9.75

EIGHT PAGE HONEY FOLDER

"Sweetheart of the Flowers"

Short description of what honey is, how produced, harvested. How to keep it, and other data of general interest. A full page of honey recipes included.

PRICES

100	_____	\$1.00	250	_____	\$2.50
500	_____	4.50	1000	_____	8.50

Extra for printing your name and address:
250 or less, 95c; 500, \$1.25; 1,000, \$1.90

Send your orders to

American Bee Journal Hamilton, Illinois

The Temperature in the Cellar

By E. S. Miller
Indiana

Last winter and the winter before, a considerable loss was reported of bees wintered in cellars. The loss was due to abnormally high temperatures and it was found necessary in some cases to remove the bees. Whenever such conditions arise, they are due to improperly constructed cellars or to overcrowding. A bee cellar should, of course, be entirely below the surface of the ground and well insulated at the top, and it should have proper ventilation. The ventilator should extend from the bottom of the cellar to a height sufficient to give something of a draft. A mere opening at the top of the cellar may be worse than useless, especially if the inside temperature is too low.

Bees generate a considerable amount of heat, and the temperature depends largely upon the number of colonies. In cold weather a large number of hives may be crowded into a small space with no bad results, but when the thermometer outside shows 60 degrees or more, the trouble begins. To guard against losses due to this condition, we find from experience that for each colony a space of about 25 cubic feet should be provided, so that for one hundred colonies a cellar 18x20 by 7 feet high is about right. With one hundred and fifty colonies in a cellar of this size there is a possibility of trouble if outside temperature runs high. On the other hand, if there are only fifty or seventy-five colonies, there may be losses owing to low temperature. The above is advised for the latitude of Chicago. It is probable that less room would be necessary farther north and more room if bees are wintered in cellars farther south.

In our twenty-five years of cellar wintering, losses have been small, usually running around 2 per cent. Most of this has been due to colonies becoming queenless after our last fall inspection. The temperature is maintained at approximately 45 degrees, with but little variation. In only one or two cases have the bees become restless, and that was because of too many for the amount of room provided.

"Poland Booms Honey"

This is the title of a newspaper clipping taken from the Associated Press, dated May 22, and sent in by Alfred H. Perring, of Florida, which reports that "Railway men at Warsaw, Poland, encouraged by the railroad to install hives of bees along the rights of way, are bringing Poland back to its pre-war position in honey production. Some 4000 beekeepers netted \$150,000 from honey last year."

Who Can Beat This Record?

By Wilbur Sheron
Indiana

This is the generation of records. To break a speed record by air or auto, to sit the longest in a tree or on a flag pole, or to make the best footrace across the continent are a few of the outstanding goals towards which record breakers are striving.

For the present, I am claiming the record for the biggest crop of comb honey produced in 1931. This year I put on one colony a full-depth super with six standard Hoffman frames evenly spaced, intending to supply two more frames at a later date. Then I forgot all about the matter until it was time to take off the supers. Each of those frames netted me ten pounds or more of honey, and the heaviest one gave me eleven and one-half pounds, and that is the record which I am wondering if anyone can beat for this season. One standard Hoffman frame with eleven and one-half pounds of honey net.

The honeyflow was heavy here this year and each of these six frames was drawn out perfectly to the limits of the space available and capped over in perfectly good shape. There was not a burr-comb or brace-comb anywhere in the super. This is very unusual with me, for heretofore any super containing less than eight frames (the number I use in a ten-frame super) would always be decorated with a generous amount of burr- and brace-combs, and sometimes new combs would be built in between the frames. If some way could be figured out to make bees fill out six combs in the lean years as perfectly and nicely as they filled these six this year, it would be a great saving in combs for the beekeeper.

In the shallow depth supers one comb netted five pounds of honey. Heretofore I have figured five to six pounds for the standard frame and about three to three and one-half for the shallow frames.

British Columbian Figures

According to the report of Vice-Consul L. W. Taylor, of Vancouver, British Columbia, there are more than 3,000 beekeepers in the Province producing about 561 tons of honey in 1930.

The important producing areas are the O'Kanagan Valley, Fraser Valley, Kootenay district, central British Columbia and Vancouver Island. More than 400,000 pounds of honey are imported regularly from other parts of Canada and 30,000 pounds principally from the United States. British Columbia exports less than 2,500 pounds of honey.

Honey from the United States must be marked with the name of the country and the net weight.

Clear H Crystal
HONEY JARS
will sell your honey

No panels to catch shadows which darken the color. Beautiful in Clarity and Pattern, and Strength in Construction.

4 SIZES - Individual, Half Pound, One Pound and Two Pound. Accurate Graduation.
WRITE FOR SAMPLES AND PRICES
HAZEL ATLAS GLASS CO.
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WORLD'S LARGEST MANUFACTURERS
GLASS FOOD CONTAINERS

"BEE SUPPLIES"

When you buy **RUSCH** supplies you get **QUALITY SERVICE** and **REASONABLE PRICES**.

A trial order will convince you.

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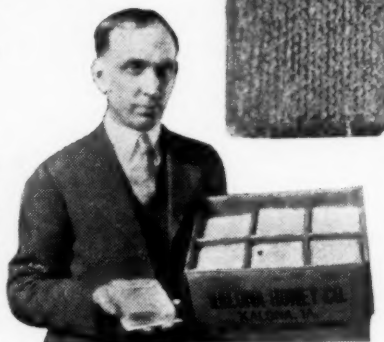
"REIF RAPPED"

Is the comb honey that sells.

"It's Modern"

Since the advent of Cellophane, it is no longer necessary to pack noodles, macaroni cookies, etc., in boxes, but sales have doubled on these food items wrapped in Cellophane.

"REIF RAPPED" comb honey is doing the same.



Big Profits

on comb honey, and a greater consumer demand, is certain for beekeepers using

"REIF RAPPED"

process.

No dust catching, leaking, expensive sections.

You also get around 25 per cent increase per colony by producing in 4½" shallow frames instead of sections.

MY PRICE—Remember, for 50 cents you get 24 cellophane wrappers, 24 fiber bases, and one shipping case holding 24 finished cakes, or \$45.00 in hundred lots, F. O. B. Kalona, Iowa. Weight, 2 pounds each.

Write today for further information to

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27 Years Producing the Best of Honey Gathering Queens

In order to move quickly a large number of fine queens, we again will guarantee safe introduction of our queens along with entire satisfaction otherwise. Follow directions to the best of your ability is all we ask. If unsuccessful in introducing, we will replace until you are successful or refund cash paid us. All queens are large, fine, beautiful ones.

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American Bee Journal

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WATERLOO, IOWA

"Better Bred" Italian Queens 35c each any number

These queens are as good as money can buy, absolutely guaranteed in every respect. Healthy, gentle, and honey getters. No disease ever known here. Health certificate with each order. SEND \$3.25 FOR TRIAL ORDER OF TEN QUEENS

2-lb. Package bees with selected queen\$2.00

3-lb. Package bees with selected queen 2.50

Reference: Citronelle State Bank, Citronelle, Alabama

CALVERT APIARIES, Incorporated, CALVERT, ALABAMA
R. G. Holder

SEPTEMBER QUEENS AT 30c COST

Through September and October will continue to furnish good queens at 30c each.

Guaranteed to be as good as any at any price

Crowville Apiaries, Winnsboro, La.

"Eat Honey" Sticker



For pasting on letters, tops of cans and jars, parcel post or express packages, and in conspicuous places for advertising.

Red background, white letters.

Millions used. Come ready gummed.

Price: 100, 20c; 1000, 40c.

Larger size, 1¼x4¾. Price: 250, 50c; 1000, \$1.25.

AMERICAN BEE JOURNAL
HAMILTON, ILL.

Moore's Strain

Leather Colored Italian Queens

SUPERIOR STOCK

50c Each

World-wide reputation for honey-gathering, hardiness, gentleness, etc., since 1879. Safe arrival and satisfaction guaranteed.

J. P. Moore

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Select young three-banded Italians

Bred for Service.

Vigorous, Gentle, Productive.

40c Each, Postpaid
Any Number

Return mail shipments if desired

Safe arrival guaranteed

W. D. ACHORD

Fitzpatrick, Ala.

Extensive producers for nineteen years

Crop and Market Report

Compiled by M. G. Dadant

For our October crop and market report, we asked reporters to answer the following questions:

1. Total crop compared to 1930?
2. Are conditions improved over a month ago?
3. How is honey selling?
4. Do you anticipate any trouble in disposing of the crop?

Crop Compared to 1930

The writer was very much amazed to find the extreme shortage of the honey crop this year, which also has extended over such a large part of the territory. Roughly speaking, the sections of the country which were extremely dry last year are more favored in 1931 and the more favored 1930 sections are dry this year.

For purposes of comparison, the country has been divided into four different crop areas, those being extremely poor, those states being fair but below 1930, those possibly up to 1930 but below average, and those above 1930.

Those states reporting poor crops are California, Oregon, Nevada, Utah, Colorado, Nebraska, South Dakota, Minnesota, Wisconsin, southern Michigan, Iowa, Oklahoma, Wyoming.

Those fair, but below 1930, are Idaho, Montana, Arizona, New Mexico, Kansas, northern Michigan, New Jersey, North Dakota.

Those possibly up to 1930 crop, but below average, are Missouri, Illinois, Arkansas, Georgia, Florida, Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island, Delaware, West Virginia, Tennessee, Pennsylvania, Ohio, Indiana.

Those states reporting above 1930 are Kentucky, New York, Maryland, Virginia, North Carolina, South Carolina, Louisiana, Mississippi, Alabama, Texas.

As a matter of fact the only states which are really getting very good crops are Virginia, North Carolina, Maryland, Louisiana, and Texas.

This being the case, we can surmise that the crop this year is going to be extremely short, particularly as the intermountain sections, which are the largest shippers, are very short this year. An improvement was noted late in the season in the territory comprising Idaho, Montana and part of North Dakota and northern Wyoming. Also improvements are noted in the fall crop states of Missouri, Illinois, Indiana, and Ohio.

Improved Over a Month Ago

As stated above, conditions are improved in part of the northwest territory and in the central west. There has

also been some noticeable improvements in the southeastern sections of the country and in Texas. The dry area as a rule, however, has not improved very much except too late for the bees to take advantage of it and too late to do the honey plants most good.

The white clover area as a rule does not appear to be able to promise a very big harvest for next year, although white clover, being young, was not killed unless there was an extreme drought. In our own locality here, we are surprised at the survival of the white clover after the rains started, even though we had drought earlier in the season.

How Is Honey Selling?

In practically all instances, honey is selling slowly. This is to be expected, as there has been a bumper crop this year of peaches, grapes, and the apple crop just now is being harvested. We do not look for a heavy selling of honey, particularly until the apple crop is out of the way and more particularly until the cold weather has come. Many parties are reporting, however, that there is considerable inquiry both in a retail way and for carload lots. Reports have also come that the bigger buyers as well as the German markets are now seeking honey, although, of course, at as low a level as they can possibly buy it.

Disposing of Crop

In practically all instances there does not seem to be any question but what the 1931 crop can be disposed of before the new crop comes in in 1932. The states of Louisiana and Texas have probably the largest question as to whether the crop can be disposed of. Georgia and Florida are in a similar position. Some of the New England states seem to fear that perhaps they will not be able to dispose of their harvest, but all in all we believe the universal answer has been this year that the crop will be disposed of satisfactorily before the new crop comes in, particularly if they drop in prices.

Prices on carload lots of white extracted honey have ruled within the neighborhood of 7 cents per pound, delivered. We do not look for very much reduction in these prices except among the uninformed and perhaps a quickening of price when winter sets in. It does not appear that it would be difficult for the smaller beekeepers to dispose of their honey without any great drop in prices over a year ago.

Below we append a suggested price list for honey this year, which perhaps may be too high, but we believe which can be obtained under existing crop conditions.

	Car Lot White	Car Lot Amber	C. L. Comb No. 1	10 lbs. to Grocer	10 lbs. Retail	5 lbs. to Grocer	5 lbs. Retail	10 lbs. Comb Ret.	5 lbs. Comb Ret.	1-lb. to Grocer	1-lb. Glass Retail	Comb to Grocer	Comb per Section
Northeast	.07 1/2	---	---	1.20	1.50	.60	.75	---	---	.20	.25	4.50	.25
Southeast	---	---	---	---	1.50	---	.75	1.75	1.00	.20	.25	4.00	.25
South	---	---	---	1.10	1.40	.50	.65	1.50	.90	---	---	---	---
Texas	.06	.05	---	.80	1.00	.45	.55	1.40	.80	---	---	---	---
Southwest	---	.04	---	.80	1.00	.45	.55	---	---	---	---	3.00	.18
North Central	.06-7	.05-6	---	1.20	1.40	.55	.70	---	---	.16	.20	4.50	.25
Plains States	.05-6	.04-5	3.25	.90	1.10	.45	.60	---	---	.16	.20	3.60	.20
Intermountain	.05-6	.04-5	3.25	.90	1.10	.45	.60	---	---	.16	.20	3.50	.20
Pacific Northwest	.05-6	.04-5	---	.90	1.10	.45	.55	---	---	.16	.20	3.50	.20
California	.05-7	.03-5	---	.90	1.10	.45	.55	---	---	.16	.20	3.00	.20

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Submit samples, and best prices, freight prepaid
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AMERICAN BEE JOURNAL

Edwin H. Guertin 236 N. Clark St.
Chicago

Buy and Sell All Grades Extracted Honey
References: 1st National Bank, R. G. Dun or
Bradstreet's Commercial Reports.

The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEES AND QUEENS

THOSE fine packages, shipped on combs drawn from Dadant's wired foundation, will be ready. See advertisements past two months. Jes Dalton, Kenner, La.

35 CENTS EACH—Good untested queens, while they last. Tested queens, fall and winter, 75 cents each. D. W. Howell, Shellman, Ga.

CAN still supply select young laying queens, 50 cents each, return mail. Jasper Knight, Hayneville, Ala.

TO TRADE—Package bees and queens for white extracted honey. T. W. Bureson & Son, Waxahachie, Texas.

MERRILL'S prices on bees and queens will please you. Have reared over 350,000 queens in twenty years. Merrill Bee Company, Buckatunna, Miss.

\$5,000.00 CASH gives possession—balance on long terms—to one of the South's leading package and queen bee establishments as a going concern; including modern house, nearly a dozen spacious outbuildings, queen yard covering several acres, hundreds of colonies of bees, thousands of nuclei, mailing list of many thousands of satisfied customers. Making a substantial profit this year. This is a give-away at this price. Interested parties, with cash, should investigate immediately. Bees state inspected and guaranteed free from disease. Address American Bee Journal, Box XI.

FOR SALE

OLD BOOKS on bees for sale. Write us for list and prices. John F. Hawkins, P. O. Box 203, Chester, Pa.

FOR SALE—100 colonies of Italian bees, 200 comb honey supers, 100 extracting supers with drawn comb. All combs built from full sheets foundation. Will guarantee free from disease. The first reasonable offer takes them. Bert Gander, Bayard, Iowa.

FOR SALE—Fifty-eight colonies bees. Bargain. Frank Rumbarger, Bellwood, Pa.

FOR SALE—100 colonies of bees in fine condition; with or without surplus honey. Reasonable. W. E. Baker, Odell, Ill.

FOR SALE—Or will exchange on a reasonable basis, pure bred Holstein calves, yearlings or mature stock, for bees, honey or equipment. Harry Luer, Jerseyville, Ill.

150 COLONIES Italian bees; double hive bodies or separate food chambers. Guaranteed free of disease. Heavily stocked with honey for winter. Mrs. Frank Bishop, 906 N. Snodgrass St., Taylorville, Ill.

FOR SALE—Cheap: Used honey cans, two to case, in good condition. Limited quantity. E. Rau & Co., 119 N. Franklin Street, Chicago, Ill.

HONEY FOR SALE

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

FOR SALE—White clover honey in 60-pound cans. None finer. Satisfaction guaranteed. J. F. Moore, Tiffin, Ohio.

HONEY FOR SALE—All grades, and quantity. H. & S. Honey and Wax Company, Inc., 265 Greenwich St., New York City.

FOR SALE—Extra choice white clover honey, case or carload; also amber. David Running, Filion, Mich.

FOR SALE—Our own crop white clover and amber fall honey in barrels and cans. State quantity wanted and we will quote prices. Samples on request. Dadant & Sons, Hamilton, Illinois.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

NEW CROP shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colorado Honey Prod. Ass'n, Denver, Colo.

WHITE Clover extracted honey. Write for prices and samples. Kalona Honey Co., Kalona, Iowa.

CLOVER honey, choice, ripened on bees. Satisfaction guaranteed. Case or quantity. E. J. Stahlman, Grover Hill, Ohio.

HONEY FOR SALE—White and amber honey in 60-lb., 10-lb. and 5-lb. tins. Write for prices. Dadant & Sons, Hamilton, Illinois.

FOR SALE—Sweet clover extracted honey; quality and body fine. Thomas Atkinson, Route 5, Omaha, Neb.

HOWDY'S HONEY—None finer. Fully ripened clover from central Michigan. Car lot or less. Write for prices, stating quantity wanted. Howard Potter, Jr., Ithaca, Mich.

HONEY—We sell the best. Comb in carriers of eight cases each; extracted, basswood, buckwheat, sweet clover, white clover and light amber. Tell us what you can use for prices. A. I. Root Company of Chicago, 224-230 West Huron St., Chicago, Ill.

BEST new clover, also buckwheat honey, in 60-pound cans. Earl Ruleson, Route 1, Amsterdam, N. Y.

STOLLER'S EXCELLENT quality clover honey, comb and extracted. Unexcelled. The Stoller Apiaries, Latty, O.

FOR SALE—No. 1 clover comb, \$3.50; No. 2, \$2.50 per case. Extracted, two 60-pound cans to case, clover, 8c; dark, 6c per pound. H. G. Quirin, Bellevue, Ohio.

ORANGE, palmetto or mangrove honey in barrels. Peter W. Sowinski, Fort Pierce, Fla.

SWEET CLOVER extracted honey, fancy grade. John Lengkeek, Poole, Neb.

FINE clover honey, extracted and comb. Case or ton. Write amount needed and get prices. L. G. Gartner, Titonka, Iowa.

FOR SALE—Bulk comb honey in shallow frames or any style container. Fred E. Hyde, New Canton, Ill.

COMB HONEY—Write for prices. Put up in carriers of eight. Charles Schwind, Belvidere, Ill.

COMB HONEY—Standard sections, eight cases to carrier. W. L. Ritter, Marengo, Ill., Route 2.

"THE WORLD'S GREATEST and finest natural health sweets"—honey and maple syrup and their products and combinations. Lowest prices in 25 years. If you want \$\$\$, line up today with the Griswold Honey Co., Madison, Ohio. Write today for our brand new circulars and specials.

WHITE sweet clover extracted and bulk comb honey of finest quality. Sample 10c. Charles A. Eagle, 1610 Fourth Ave. South, Fargo, N. Dak.

FOR SALE—Comb honey, 4¼x4¼x1½ sections. C. Holm, Genoa, Ill.

BEST quality white extracted in new sixties, case or ton lots. Ask for price and sample. Harry C. Kirk, Armstrong, Iowa.

WHITE comb honey, packed in eight-case carriers. Earl Baker, Genoa, Ill.

FOR SALE, F. O. B. Menomone, Wis.: Light amber clover-basswood honey in 60-pound new tins, two to the case, 8c. F. O. B. Montgomery, Ala.: Light amber sweet clover honey in 60-pound tins, two to the case, 7c. Write for prices on large lots, either address, M. C. Berry & Co., Box 697, Montgomery, Alabama.

CLOVER comb No. 1, \$3.50; buckwheat, \$2.90; amber, \$2.90; No. 2, \$2.00. Extracted clover, 60-lb. cans, 8c; amber, 6c; buckwheat, 6c. Write for quantity price. F. J. Smith, Castalia, Ohio.

FOR SALE—White clover honey in 60-lb. cans, 7½c per pound. Joseph H. Hoeft, Ottoville, Ohio.

400 CASES new crop white clover comb honey. Charles Guhl, Napoleon, Ohio, R. 7.

OAKVALE APIARIES—Finest white clover comb honey, case \$3.75, carrier lots. Forrest Dygert, Hammond, N. Y.

MICHIGAN'S finest clover honey, new cans. No disease. Eight cents. John McCall, Tecumseh, Mich.

CLOVER and basswood extracted honey. Wonderful taste and flavor, heavy body and faint amber color. Sixty-pound can, \$5.00; two cans, \$9.00. If more wanted, write for prices. Sample 10c. M. Noack, Box 263, Plano, Ill.

NEW crop light amber honey, \$8.00 a case. Sample 15c. Martin Carsmoe, Ruthven, Ia.

NEW CROP shallow frame extra white comb honey in carriers or car lots, ready for shipment now. T. W. Bureson & Son, Waxahachie, Texas.

AMBER extracted and buckwheat extracted at 5½c case lots or 5c ten cases. Individual clover comb. A. J. Wilson, Hammond, N. Y.

YOU will find sales advantage in our special comb honey cartons. Send for sample and price and give the quantity you can use. A. G. Woodman Co., Grand Rapids, Mich.

HONEY AND BEESWAX WANTED

WANTED—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5 cents a pound for wax rendering. Fred W. Muth Company, 204 Walnut St., Cincinnati, Ohio.

WANTED—Western states water-white and white honey in car lots. Send type samples. Advise quantity, price and point of shipment. E. F. Lane & Son, 325 Davis St., San Francisco, Calif.

WANTED—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same. J. S. Bulkley, 816 Hazel St., Birmingham, Mich.

WANTED—Car lots of honey. State quantity, shipping point and price. Mail sample. Hamilton, Wallace & Bryant, Los Angeles, Calif.

HONEY WANTED—Comb and extracted. Send sample and quote lowest prices. John Harnack & Son, McGregor, Iowa.

WANTED

WANTED—Experienced beekeeper for season 1932. 600 colonies. State age, experience and wages expected. Mrs. Edna Schellhorn, Huntley, Mont.

SUPPLIES

MAKE queen introduction sure. One Safe cage by mail, 25c; five for \$1.00. Allen Latham, Norwichtown, Conn.

THE DADANT SYSTEM IN ITALIAN—

The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Api-cultura Dadant." Send orders to the American Bee Journal. Price \$1.00.

BEST QUALITY bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colo.

FOR SALE—We are constantly accumulating bee supplies, slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it. Dadant & Sons, Hamilton, Illinois.

MISCELLANEOUS

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, \$2.55 (10/6). The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

PLANS FOR POULTRY HOUSES—150 illustrations. Secret of getting winter eggs. You need this book. Write for free offer and sample copy of Inland Poultry Journal, 51 Cord Bldg., Indianapolis, Ind.

MARBLEBOARD BINDER—For back copies of the American Bee Journal. Will hold two years. Keeps your magazines in shape for ready reference. Price only 75c, postpaid. American Bee Journal, Hamilton, Ill.

HONEY LABELS and printing. Catalog and samples free. Correspondence solicited. Traders Printing Company, Springfield, Mo.

LISTEN—Why worry about the honeyflow? Plant Vitex (Negundo Incisa). They bloom and secrete nectar from June until frost regardless of season. My large supply this season enables me to sell at greatly reduced prices. Also Vitex seed, \$1.50 per ounce; two ounces for \$2.50. Supply limited. (Order early.) Charles F. Mottet, Webb City, Mo.

HAVE YOU any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so, send us a list. American Bee Journal, Hamilton, Ill.

\$2.95 PER 1000 ENVELOPES, letterheads, business cards. R. Davidson, 310 Curtis St., Middletown, Ohio.

IMPROVED MAMMOTH breeders bullfrogs, \$20.00 dozen. Highest sterilized Health Brown Delicious rice, 5 cents pound; 25 lbs up shipped. John Hoyt, Estherwood, La.

GROW Vitex trees for beauty and bees. Twelve 24-inch trees, 30c; twenty-five or more at 25c. Twenty-four 36-inch trees, 50c; twenty-five or more, 40c. All prepaid. Seed at \$1.50 per ounce. Joe Stallsmith, Galena, Kansas.

American Honey Institute Accepts Resignation of Dr. Barnard

On August 31, Dr. Harry E. Barnard wrote the Board of Directors of American Honey Institute as follows:

Aug. 31, 1931.

To the Board of Directors of the American Honey Institute.

Mr. Lewis Parks,
Chairman of the Board:

On September first I take over the work of the Associated Corn Products Manufacturers and begin the develop-

ment of a program of research and education.

While my new work will in no way be competitive with the aims and purposes of the American Honey Institute, it seems desirable at this time that I tender my resignation as president of the American Honey Institute.

H. E. Barnard.

In view of this situation the following directors, Louis Parks, L. C. Dadant, E. G. Brown and G. L. Shideler, gathered at a meeting at the Sherman Hotel, Chicago, September 22, recommended the acceptance of Dr. Barnard's resignation as president of the American Honey Institute and the continuance of the Institute program under the direction of the Board of Directors, with Malitta D. Fischer as secretary and Lavonne Taylor as assistant secretary, until the annual meeting in February, 1932, at Columbus, Ohio.

Newly Organized Missouri Association

The newly organized Missouri State Beekeepers' Association held a meeting for the election of regular officers at Sedalia, August 25, 1931. The following officers were elected: A. W. Gale, Chillicothe, president; Berl Caldwell, Ritchey, vice-president; Miss Nina Scott, Clinton, secretary-treasurer.

The beekeepers had at the State Fair a wonderful exhibit of fine honey, high quality beeswax and good bees and queens. The Leahy Manufacturing Company had a very interesting display of all up-to-date and standard bee equipment. The display in the honey cookery department was exceptionally fine and varied and showed plainly that honey may be used successfully in baking and in canning fruit and vegetables. This honey cookery is very important and should be increasingly emphasized. It is in line with the work done by Miss Malitta D. Fischer, representing the American Honey Institute. Miss Fischer demonstrated many new and pleasing ways of using honey, which she explained to the crowd of women who surrounded her every day during the whole week of the fair. She gave recipes and samples of the food, and the recipes were much appreciated and the food equally enjoyed.

Messrs. William Brengarth and Charles Denny, apiarists, put on a good live bee demonstration in which Mr. Brengarth acquired a heavy beard of bees in a few minutes.

Nina Scott, Secretary.

Eat Your Own Honey

Use your honey instead of sugar. When you get waffles at a hotel or restaurant, insist upon honey. If they haven't it, get up and leave. Go to a place that serves it. I have started two local places serving honey by my "finicky" notions of having it.

At home I eat no commercial sugar whatever. Honey is used in all foods and for canning wherever sweet is needed. I myself eat over ten gallons a year and it agrees with me. Some dairymen sell their cream and buy "oleo." I wonder how many beekeepers sell their honey and buy sugar?

Joe Marty, Oregon.

National Honey Week Stickers

Nov. 7 to 14 inclusive

Use the stickers on your letters, give them to your friends to use on the mail that they send out. These will call the attention to the public that National Honey Week is on from November 7 to 14 inclusive. These stickers can be bought from the American Bee Journal at the following prices:

Lots of 50	_____	\$.20	} Postpaid
" " 100	_____	.30	
" " 500	_____	1.00	
" " 1000	_____	1.75	

Send orders to the American Bee Journal, Hamilton, Illinois.

Cooperating with American Honey Institute, Indianapolis, Indiana.

We solicit your correspondence and shipments of honey. Submit samples of your honey and price to net F. O. B. your station.

E. RAU & CO.

Receivers and Distributors of
HONEY

110 North Franklin St.

Chicago

The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

Let's Have a Natural Foods Institute

Recently there has been organized a fresh fruits and vegetables institute under the leadership of a prominent produce merchant of Cincinnati. It is supported by contributions from the trade and is gathering information from many sources for the purpose of conducting an educational campaign similar to that fostered by the American Honey Institute.

The question arises, why not pool our interests and bring together all non-competing food products under one head. This will make possible great savings in overhead, such as salary of director, postage, printing, etc. Nearly every recipe calling for a particular product also includes several others. Apples, tomatoes, honey, peanuts and numerous others could work together without the slightest conflict. Such joint action would make possible a budget sufficient to engage a high class director, under whom could work a specialist for each product represented.

Another Cure for Foulbrood

The beekeepers' hopes have been raised so often in the past by some supposed cure for foulbrood that we may expect them to be a bit slow in accepting the new discovery described by Doctor Tanquary on page 464 of this issue. The Hutzelman solution and Jay Smith's fumigation methods promised so much that many have come to feel that fire is the only cure. However, we are assured by our Minnesota friends that they have proved the new treatment beyond question before making it public. If combs can be treated at less than a cent each, as Tanquary indicates, foulbrood will cease to be a serious matter, even though it be necessary to treat a large number of combs every season. Inspectors will become educational officers and the whole problem will assume a new aspect. We await with interest further developments.

Taxes

Here in America we complain loudly about high taxes, and certainly we feel that they should be reduced along with private income. However, we know little of tax burdens in comparison with other countries. In the Australian Bee Journal we read that the average registration fee for automobiles is \$35.00 and the gas tax 15 cents per gallon. In England we read that every citizen with an income of more than \$750.00 pays an income tax of 25 per cent. Sometimes we find comfort in the fact that others are worse off than we are.

Grayson a Beekeeper

There must be some valuable stimulation to a writer in association with the bees. In his latest series, "Adventures in Solitude," now appearing in American Magazine, David Grayson reveals the fact that he has long been a beekeeper. His comments on time spent in his garden and with his bees reveal something of the inner life of the man.

The present day tendency is to rob beekeeping of its poetry and to stimulate mass production of honey, rather than wholesome living with the bees. The men who have done most to make beekeeping an industry worth while have been men who had small apiaries, with leisure to become acquainted with the insects. Such have made important discoveries and have interested the public in the magic atmosphere of the hive.

The Changing World

Jessup's article on page 451 reminds me of a man who recently told me how he fought the building of a hard road through his farm. When finally condemnation proceedings were started he gave up and provided the right

of way. It so happened that a north and south highway crossed the east and west highway at his farm. The improved roads brought him such prosperity as he had never dreamed possible. Now he has numerous enterprises to provide for the needs of the tourists, including service station, camp, rooms, meals, etc. One can judge as to the volume of business which he does by the fact that one of the oil companies offered him \$600 per month for the exclusive rights to the sale of gasoline and oil. Yes, the roadside stand offers the beekeeper a wonderful outlet for the sale of honey. There are few stands as favorably situated as at the crossroads above mentioned, but hundreds are moving honey and garden products in profitable amounts.

A Good Package

That bulk honey package described on page 463 seems to meet a real need. When we visited Mr. Reif to see how it worked we were much impressed. A case of the honey carried for a hundred miles in the back of the car and then left around the office for a couple of months was found to be in perfect condition. The sealed sections in transparent wrappers which hold all the drip are attractive and clean. It is less expensive than comb honey and seems to please the housewife equally well.

Joubert's Bear

That story on page 466 about the beekeeper waiting at the apiary for the bear reminds me of the visitors to the melon patch. We had several acres of melons at my Iowa farm this season. After the coming of nightly visitors, Melvin (my son) spent a few nights in the patch, but found it monotonous business, since the visitors usually failed to arrive on the same nights when he was waiting.

Luck

In his wintering article C. H. Pease gives a new definition of luck. He says that, like Coleman Cox, the harder he works the more of it he has. A careful reading of that article would incline one to try cellar wintering. His results are better than anyone has so far reported for outdoor wintering, no matter how much packing is used.

A Short Crop

The crop and market page indicates the shortest honey crop for many years. Everything indicates that the honey market will be clear of any surplus before next year's crop comes on. Since the past season has brought the heaviest fruit crop in recent years, it might have been difficult to move a normal honey crop along with it. The demand for honey is affected more by the amount of fruit available, and the price at which it sells, than by direct competition with other sweets.

A Great Beekeeper

The tribute which Corkins pays to Herman Rauchfuss on page 460 is well deserved. Rauchfuss is modest and unassuming, but has a richer fund of beekeeping information than any other man I know who is still actively at work among the bees. I agree with Corkins that it is unfortunate for the industry that he has not written more about his experiences in the apiary. A few hours spent with Rauchfuss among his bees is a never-to-be-forgotten experience. In the November, 1919, issue of this magazine is an article about his method of producing comb honey.

Guesswork

Dodge is right (page 462); nothing arouses more interest than a guessing contest. Many a merchant has increased his sales by such methods. To guess the number of beans in a glass jar, the number of pounds in a big lump of coal, or the number of bees in an observation hive will always arouse the attention of the curious. We all like to boast of winning such a contest.

Frank C. Pellett.